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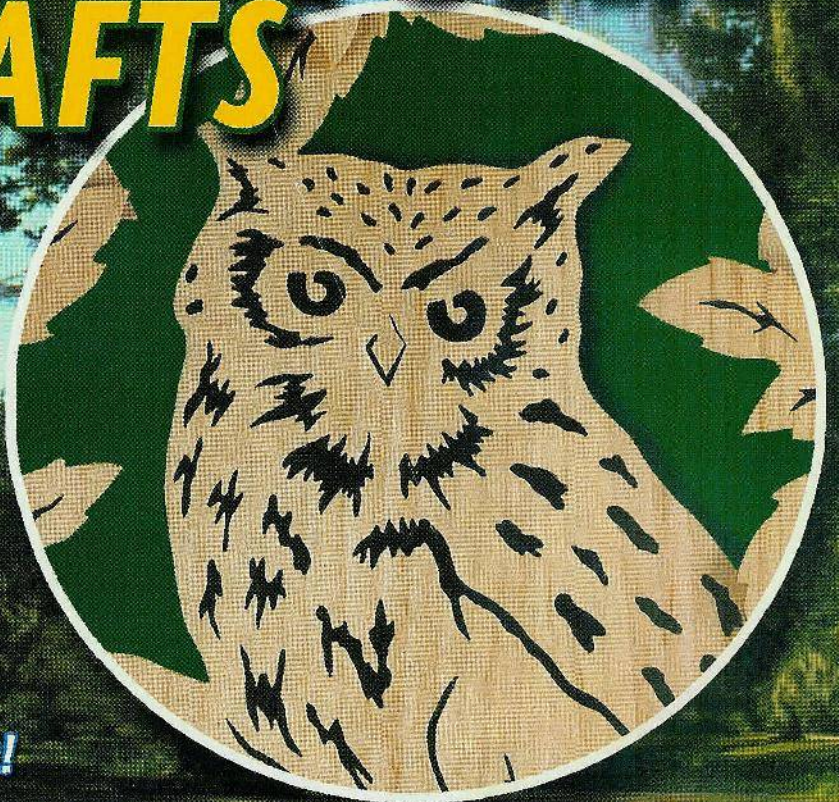
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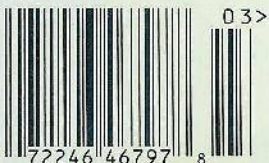
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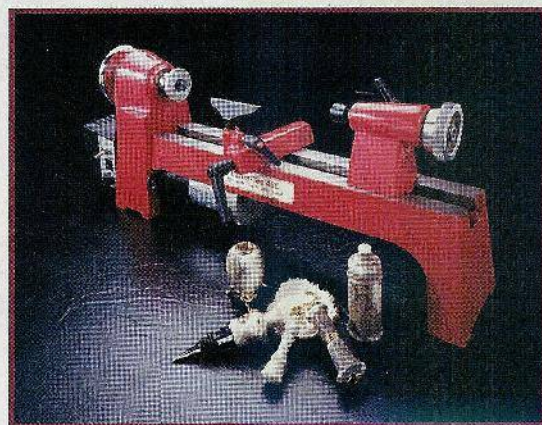
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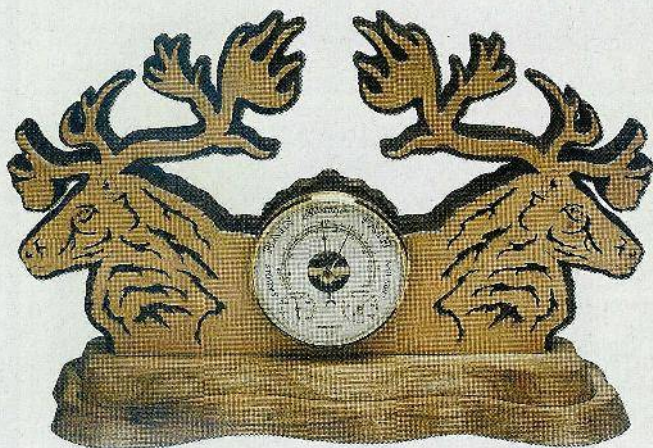
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CONTENTS



Caribou Weather Station

Scrolling projects:

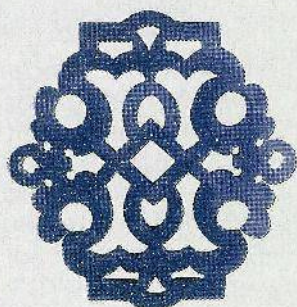
Fire-Breathing Dragon	6
Caribou Weather Station	12
Year of the Horse and Rooster	20
The Predator	28
Smallmouth Bass	32
Night Stalker	34
Frames for Good Memories	48
Basketweave Jewelry Box	52
Corian® Trivet	61

Intarsia projects:

Mammoth	62
Cajun Gator Intarsia	66



The Predator



Corian® Trivet



Potato
Head
Football
Player



Fire-Breathing Dragon



Year of the
Horse and Rooster



Smallmouth Bass

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THE FULL SIZE PATTERNS FOR THE PROJECTS SHOWN ON THIS PAGE ARE LOCATED
IN PULL OUT PATTERN SECTION NO. 1 FOUND IN THIS ISSUE.

Carving project:

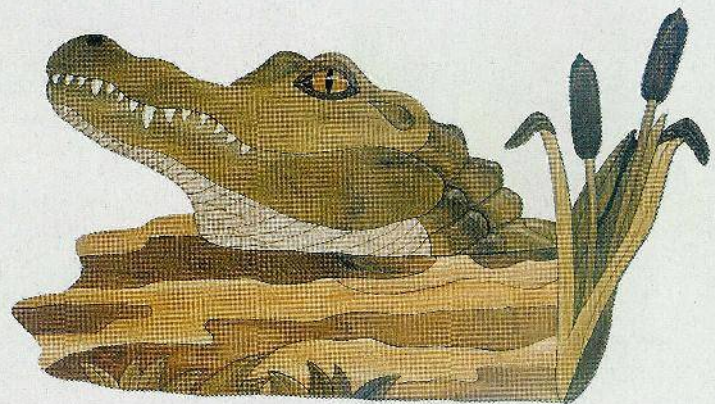
Potato Head Football Player 71

Turning project:

Turned Magnifying Glass 74

Features:

The Tower of Time 16
Finding and Using Local Woods 24
Rick Hutcheson's Shop 36
Myths and Facts about Saw Blade Steel 45
Wes' Workshop 46
Reader's Gallery 58



Cajun Gator Intarsia



Turned Magnifying Glass
(Pattern with project article)



Mammoth



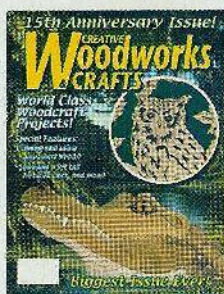
Basketweave
Jewelry Box



Frames for Good Memories



Night Stalker



ON THE COVER: This issue's cover features two projects, The Cajun Gator Intarsia by Larry Goodwin, and the Night Stalker by Denise Green. This is Larry's first project for us, so our Intarsia Editor, Bob Hlavacek, graciously agreed to make the prototype shown on the cover and take all the step-by-step photos.

THE FULL SIZE PATTERNS FOR THE PROJECTS SHOWN ON THIS PAGE ARE LOCATED IN PULL OUT PATTERN SECTION NO. 2 FOUND IN THIS ISSUE.



Fire-Breathing Dragon

designed by Dan Fenelon, sawn by John Polhemus



Introduction

This fire-breathing dragon is a good example of the kind of project I liked to make when I was doing craft shows. It looks like a lot more work than it really is. The 1/8"-thick dragon can be stack sawn, and the 3/4" contoured backer is fast and easy to cut, thus increasing the profit margin.

INSTRUCTIONS

Start with the backer

The backer is the place to start. The 1/8"-thick dragon is delicate. Making the backer first decreases the chances of the dragon getting broken while lying around (if it was cut first).

SUPPLIES

Wood: oak—one piece 1/8" x 8" x 13" (for dragon); mahogany—one piece 3/4" x 8" x 13" (for backer)

Tools: scroll saw and blades; drill press; 1-3/8" Forstner bit; router table; router and 3/8" pointed roundover bit

Finish of choice

Hanger of choice

Softened edges are more appealing to the eye than sharp edges. Rounding over the edge of the backer with a router in a router table is the way to go. The router bit guide bearing won't get into tight spots, though. An easy way to remedy this is to make a "poor boy's pin router"

continued on page 8



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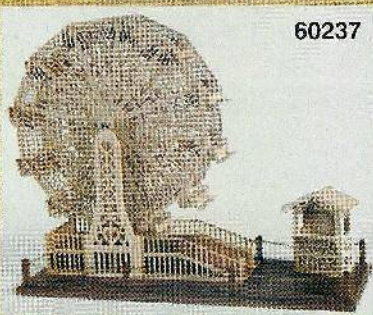
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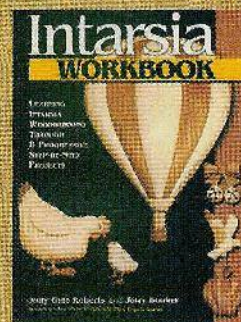
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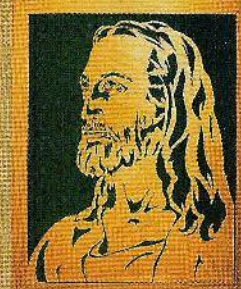
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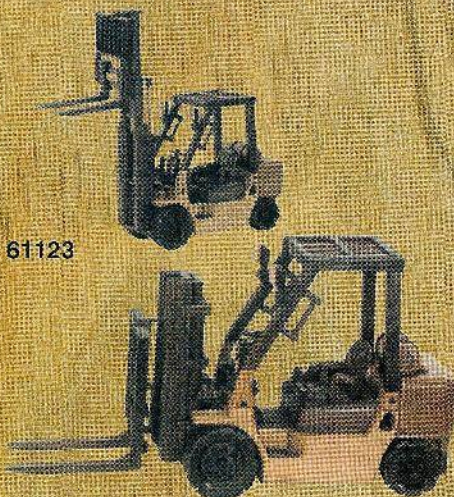


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continued from page 6

and use a pointed 3/8" roundover bit.

This pin router was made from a 1" x 3/4" x 2'-long scrap strip of oak I had lying around. The piece holding the guide pin is 4" long. The clamp strip piece is 20" long (see **Fig. 1**).



Fig. 1. Poor boy's pin router.

The only important measurement when making the pin router is the thickness of the stock to be routed. Since the backer is 3/4" thick, the piece holding the guide pin needs to be higher than 3/4" when it's glued and nailed to the clamp strip piece so the backer will have clearance. Since the scrap I used was 3/4" thick, I added an 1/8"-thick piece of plywood between the piece holding the guide pin and the clamp strip piece (see **Fig. 2**).



Fig. 2. 1/8" spacer to raise guide pin strip for clearance.

In this case, the guide pin is a 1/16" drill bit, but you could use a finish nail instead. Clip off the head of the nail and "drill" it into the end of the wood strip. Whether you use a nail or a drill bit, be sure to use a drill press so it will be perfectly straight.

With the router bit installed, center the guide pin over the bit and clamp it to the router table. Be sure the guide pin does not touch the bit (see **Fig. 3**)! The edges of the backer can now be rounded over (see **Fig. 4**).

Cut the dragon

Glue the pattern to the 1/8" wood and drill the blade entry holes. You should also drill the 1-3/8" hole for the clock insert before cutting the rest of the pattern piece. Drilling this hole after the dragon is cut or even after it is glued to the backer would almost surely break it. Use the hole later as a guide to drill the hole in the backer after the dragon is glued down in order to get a hole deep enough for the clock insert (see **Fig. 5**).

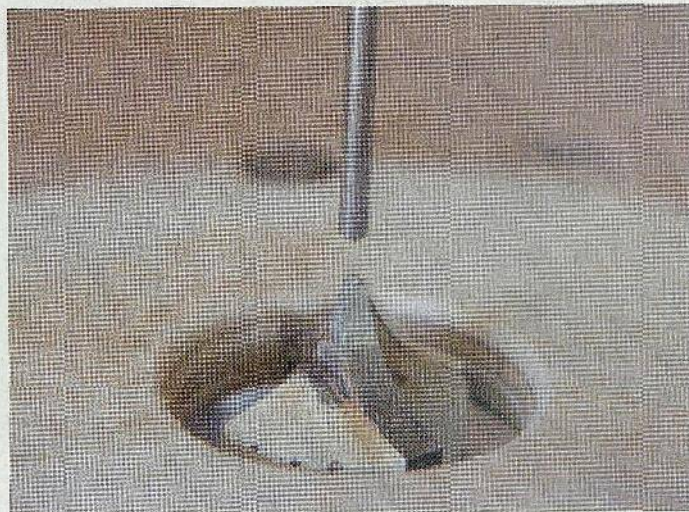
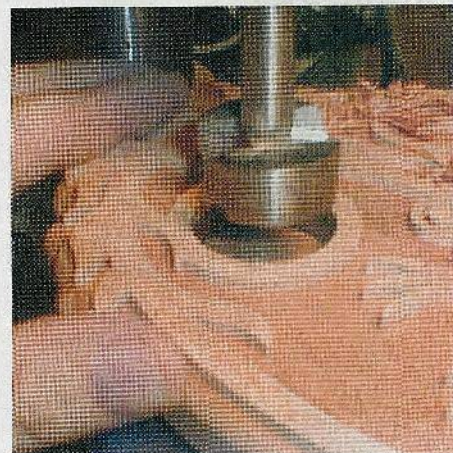


Fig. 3. Center the guide pin.



Fig. 4. Rounding over the backer's edges.

Fig. 5. Use the clock insert hole drilled in the dragon before it was cut as a guide for drilling the backer.



Assembly

Glue the dragon to its backer. Deepen the hole for the clock insert (see **Fig. 5**), apply the finish and hanger of your choice, and it's done.

For questions concerning this project, send an SASE to: John Polhemus, 3000 Charleton Ct., Waldorf, MD 20602. Email: fretsawyer@worldnet.att.net



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From the editor's desk



Our 15th Anniversary Issue

Hi folks! It seems fitting that at the beginning of a new year, on our fifteenth anniversary, there's a lot that's new finding its way onto the pages of *Creative Woodworks & Crafts*. First, we've added sixteen color pages of pure woodworking content (not advertising), and we've also increased the magazine's outer dimensions. These changes are permanent, not just a one-shot deal. There are also some great articles in this edition that bring in "new blood" and creative innovations. Rick Hutcheson represents a major new blood transfusion. Many of

you have come to know Rick through his scroll saw website, S.A.W., his books and patterns, and his friendly, knowledgeable presence at scroll saw shows throughout the U.S. each year. Rick will be making a significant contribution to *Creative Woodworks & Crafts* with a valuable feature article in every issue of 2004. This issue kicks off our Rick Hutcheson coverage with a detailed tour of his shop, narrated and photographed by our Special Projects Editor, Wes Demarest. Rick's shop is quite a piece of work, and should make good reading for many of you.

Then there's Ray and Dan Wilckens' "Tower of Time" feature. A fine line exists between genius and insanity, and I think my two friends, the Wilckens, are right on that line! How else could you explain working for three years on the most elaborate fretwork clock imaginable, one that stands nine and a half feet tall, not for money, but just to do it? Here's a tidbit that's not covered in that article: about three and a half years ago, Ray and Dan approached George Ahlers and myself at a scroll saw picnic with a certain wild gleam in their eyes. Making sure no one could overhear, they told us that they were embarking upon the creation of a very large clock that would feature endless fretwork, even on the interior, and be simply awesome. They wanted to know if we would consider housing this clock in our home offices in Newton, New Jersey, in which case they would even name the behemoth "the *Creative Woodworks & Crafts* Clock." As soon as I returned to New Jersey, I sat down with Jerry Cohen, our company's owner, to inform him about this extraordinary offer and, of course, told him how great it would be for us to have this clock on display. Unfortunately, Jerry reluctantly informed me that we simply had no place to put the clock in our building. Yes, he was honored by the offer, but no, he wasn't prepared to build an addition for the clock! I was disappointed, but after all, he was right—we were already outgrowing our building. Thus, the clock became not "the *Creative Woodworks & Crafts* Clock," but the "Tower of Time," and came to reside in Dan Wilckens' living room. Dan and Ray were right—the clock is awesome, and when you read their article, I think you'll feel the same way.

Wayne Fowler's article, "Finding and Using Local Woods," is also fascinating. Like Wes Demarest, Wayne is a woodworker who delights in finding the perfect piece of wood for each project he makes. Wayne's Horse and Rooster projects on page 20 of this issue are good examples of his adeptness in this area. Speaking of wood, I've heard from quite a few of you who really enjoy our "Wes' Wood Pile" feature, in which a different wood species is examined in every issue. Not only will this continue, but Wes is also working on a book which will compile all these magazine articles (with added detail) along with dozens of other species. This is sure to become a "wood bible" of sorts, so stay tuned until about a year from now. There was a time when Baltic birch plywood seemed to be the "staple" for so many scroll sawyers; happily, it appears that many of you have branched out into woods of all kinds and, frankly, I think this is a good thing. Not that Baltic birch isn't ideal for many applications—it's just that there are so many woods to use and so much beauty to create!

On another note, you've probably noticed (or will notice) that this issue's graphic design has a new look. That's because it's had a new artist, Associate Editor Kathy Morawski. Kathy is a very talented artist in her own right and has given a fresh look to this Fifteenth Anniversary Edition. Thanks, Kathy!

Before signing off, I've got to acknowledge Bob Hlavacek for his beyond-the-call-of-duty contribution to this edition. Not only did he design and build his unique Woolly Mammoth mini intarsia/scroll saw project, but he also "discovered" Larry Goodwin, the talented cajun intarsia addict whose alligator appears on this issue's front cover. Because Larry is brand new to designing for us, Bob actually made a second model of the gator and took almost thirty step-by-step photos, ensuring that everything was in good order prior to publication. Apparently, Bob is a good talent scout—Larry Goodwin is a creative, enthusiastic designer whose work we will continue to feature.

This issue's got lots more that I could write passionately about, but why keep writing when there are pages to turn, projects to check out, features to read, and ideas to inspire us. Anyway, I've run out of space! To all the designers and woodworkers who helped bring this issue to life, THANK YOU, and to all of you, our loyal readers, Happy New Year!

Sincerely,

Robert A. Becker

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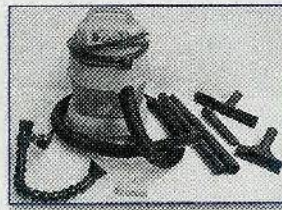
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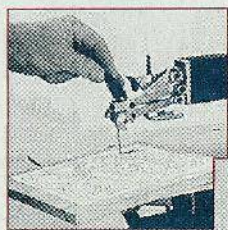
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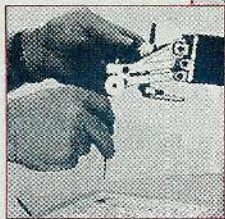
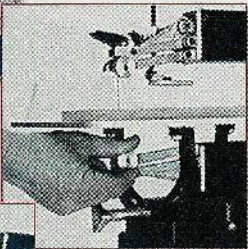
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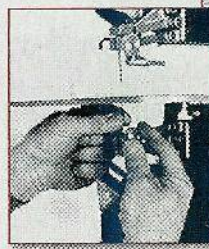


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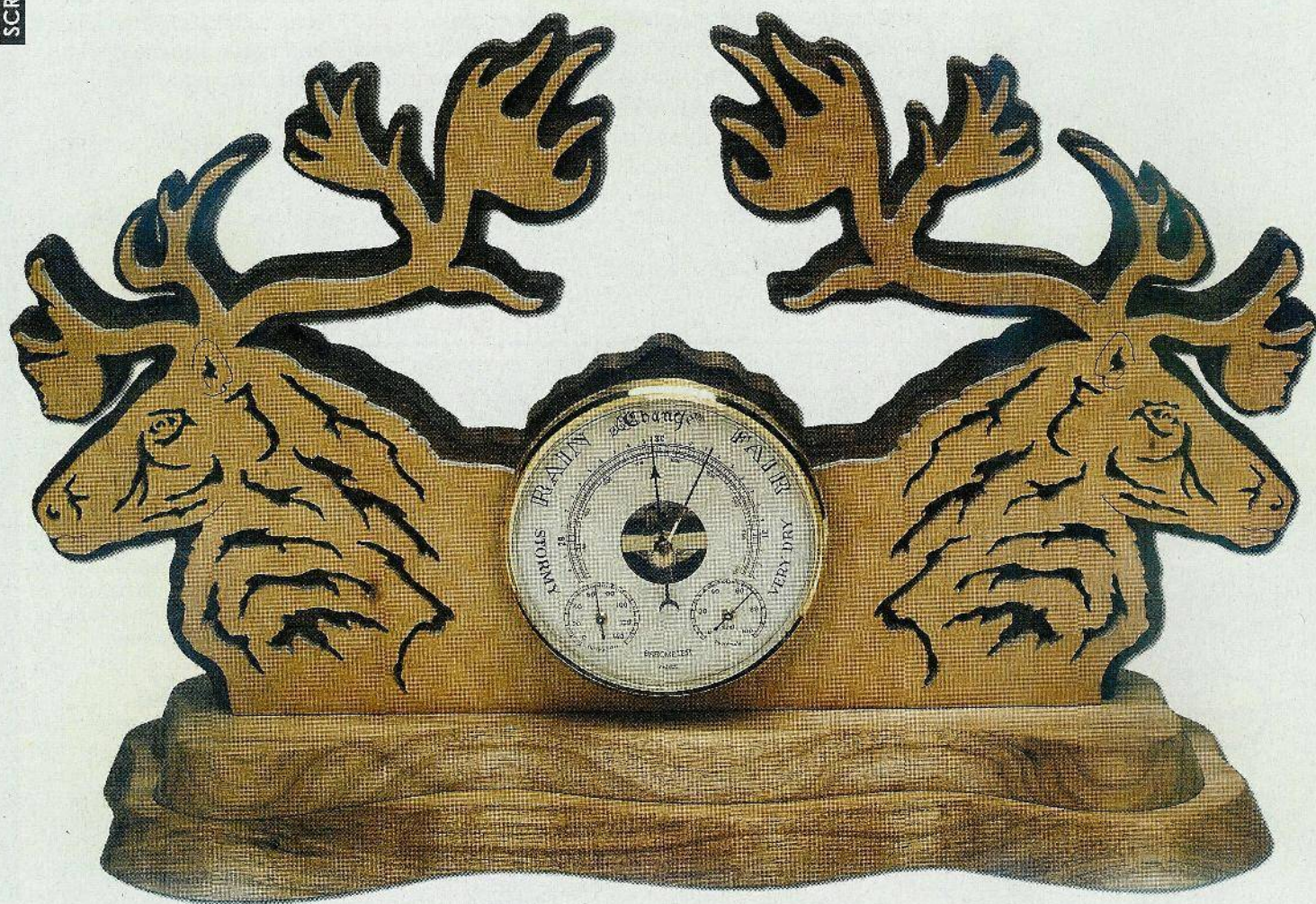
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Lepage carpenter's glue

Assorted clamps

Clear gloss spray of choice

Stain: Golden Oak and Dark Walnut

Tung oil of choice (low lustre)

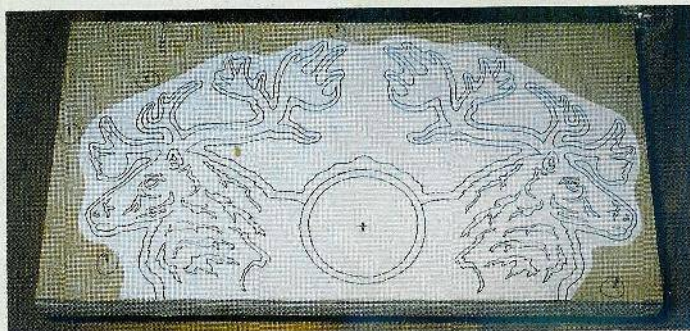
Four 1" wood screws

3-7/8"-O.D. Thermometer/Barometer/Hygrometer Combo, Stock #3715*

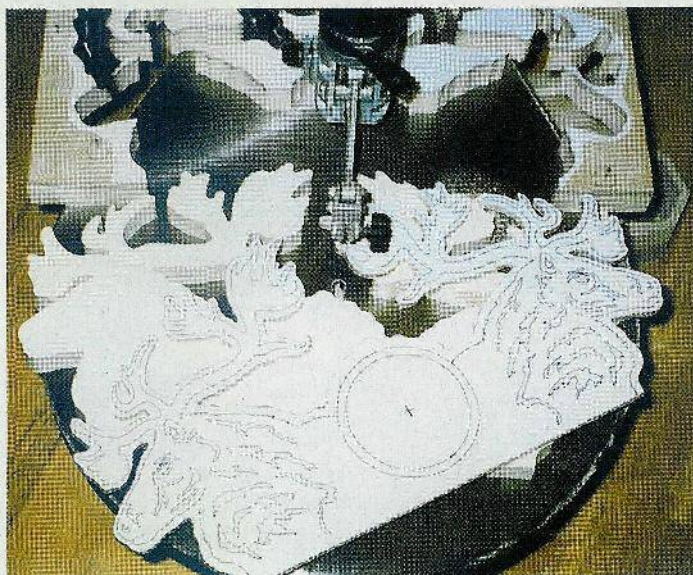
*Available from Wildwood Designs, 1-800-470-9090.

INSTRUCTIONS

Step 1. Temporarily attach pattern to the 1/4" plywood with spray adhesive.



Step 2. Nail 1/4" plywood to 3/4" pine backer board, keeping bottom edges flush, and nailing outside the outer perimeter of the pattern.



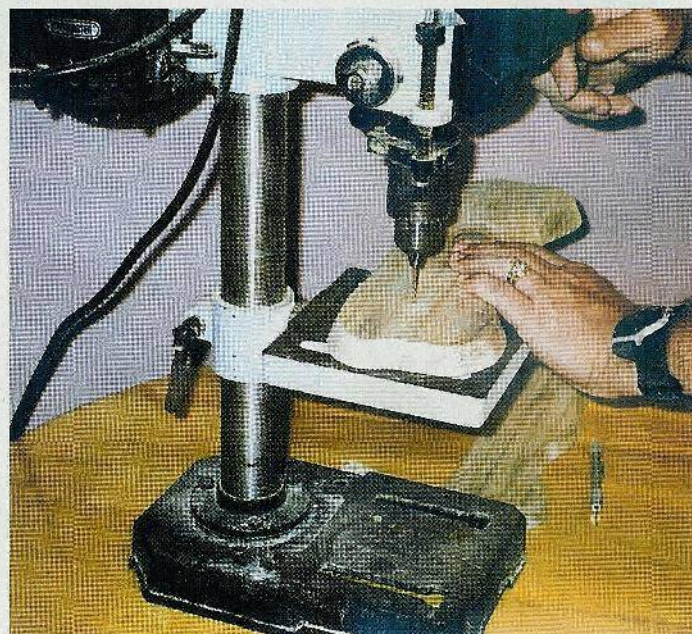
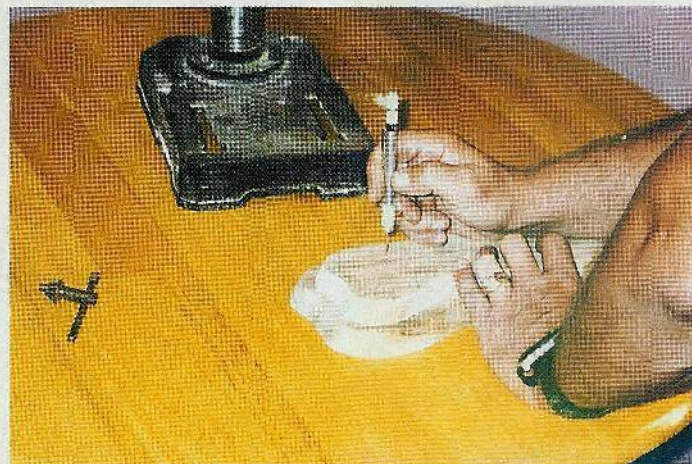
Step 3. Scroll along the outside line of caribou pattern first. This line is marked "outer perimeter of backer board" on the full-size pattern. The plywood overlay and backer board will now be separated.

Step 4. Drill blade entry holes in the caribou overlay and make all inside cuts. **Note:** do not cut out weather combo insert hole at this time.

Step 5. Now scroll saw along the perimeter pattern line of the caribou overlay and make center punch mark for weather station insert.

Step 6. Remove caribou overlay pattern from 1/4" plywood and lightly sand. Then stain the caribou overlay with Golden Oak and stain 3/4" backer board with Dark Walnut. Set aside to dry.

Step 7. Temporarily attach base patterns to wood.



Step 9. Center the top base over the bottom base. Using a small drill bit and the two outer holes of the top base as guides, mark two holes on the bottom base. Next, drill the pilot holes through the bottom base where just marked.

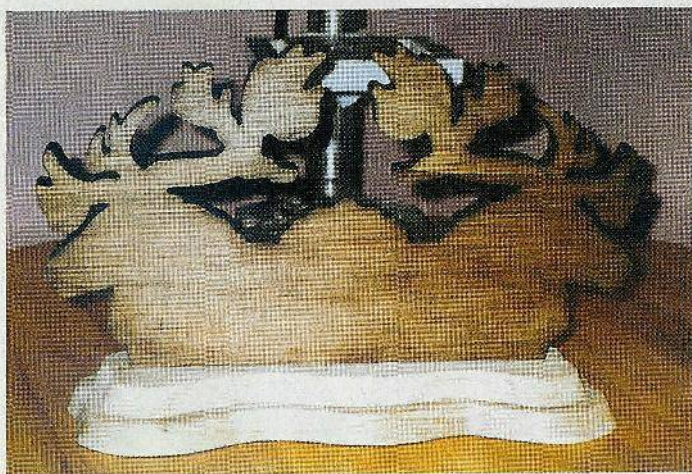


Step 8. Cut out top and bottom bases at 22°, then drill the four pilot holes through the top base where indicated on pattern.



Step 10. Working from the bottom side of both bases, countersink the two inside holes on top base and the two holes on bottom base.

continued on page 14



Step 11. Center backer board over the holes in the top base and temporarily screw the three parts together to test for fit. When satisfied with the fit, separate the three pieces.



Step 12. Using carpenter's glue, adhere overlay of caribou to the backer, making sure bottom edges are flush. Clamp and allow to dry.



Step 13. When dry, using 3" Forstner bit, drill the hole for the weather station insert to a depth of 7/8". **Note:** you may have to sand the hole for a perfect fit.

Step 14. Screw the top base into the caribou, then screw the bottom base to the top base.

Step 15. Spray 3 to 4 light coats of a clear gloss protective finish. When dry, insert weather station combo, sit on mantle and predict the weather for your friends. Enjoy!

Optional: this pattern will also accept a quartz clock insert with an outside diameter of 3-1/2" that fits in a 3" hole (also available through Wildwood Designs).

Send questions concerning this project to: Darrin Baldini, Ambrichey Manor, P.O. Box 11, 65 Front St. West, Hastings, Ontario, Canada K0L 1Y0.

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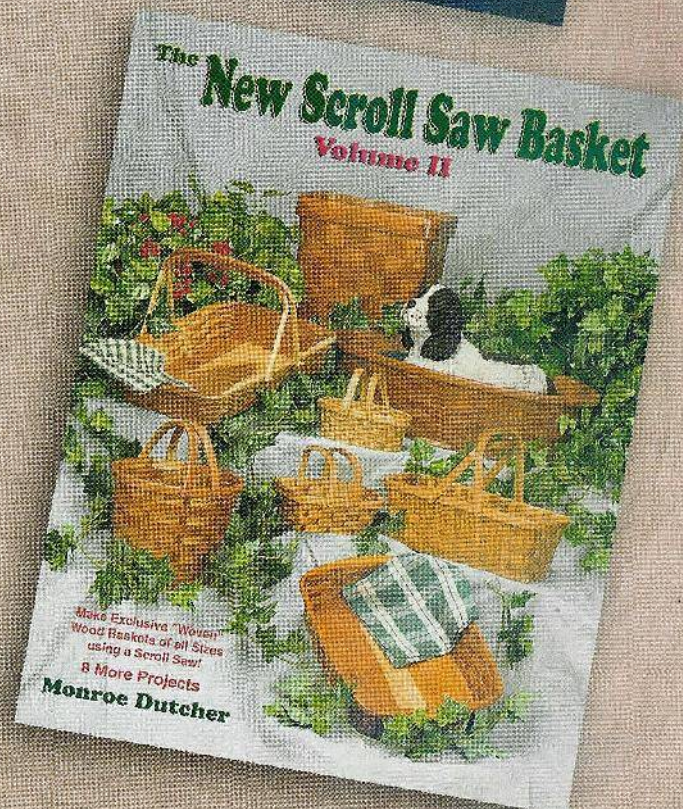
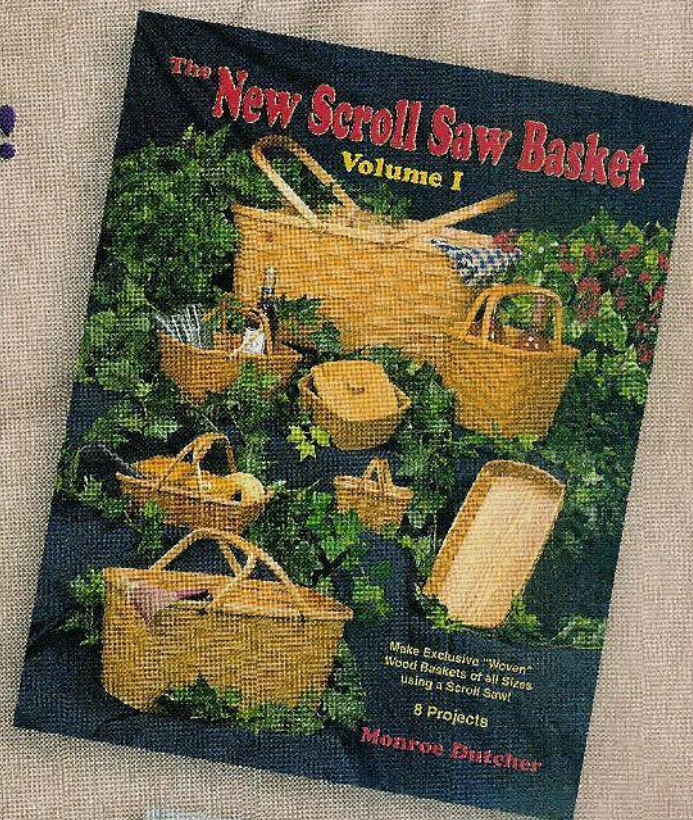
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the Tower

Editor's Introduction

In the summer of 2000, I heard from my good friends, Ray and Dan Wilckens, about their plans to build an extremely ambitious fretwork clock. I found the idea for the project to be quite interesting; however, it was only as photos of the clock-in-progress were sent to me, a few at a time, that I began to realize just how remarkable The Tower of Time really was. Ray and Dan are real clock-makers—they love designing and building fretwork clocks of all shapes and sizes. Over the past eight years, I've worked closely with both of them, and have developed a deep appreciation of their craft. I can say that, in my opinion, The Tower of Time represents their pinnacle achievement to date. Now, in their own words, let's learn about what went into this extraordinary project.

Dan's reflections on the project

As people walk up to The Tower of Time (which resides in my living room) and tilt their heads toward the ceiling, the effort put in by my dad and I seems worth it just for the expressions upon their faces. The clock stands nine and a half feet tall and commands the attention of all who come into its presence. We see this giant as the big brother of a clock we built more than eight years ago for a clock-maker's contest. That clock, which was shown in the June '97 issue of *Creative Woodworks & Crafts*, generated great

The first Tower of Time clock ever built, by Dr. Ira Anjoorian.

of time



Father and son, Ray (right) and Dan Wilckens.

interest nationwide and became the driving force behind The Tower of Time. Honestly, The Tower of Time challenged dad and I from start to finish, but now that it's been completed, we are very proud of the results.

Designing the clock and building two prototypes

The Tower of Time's design effort began in July of 2000 and was finished in late November of the same year. The design phase took 150 hours. Dan and Ray commenced the building of their clock in September of 2000 and completed it in March of 2003. It should be noted, however, that they both were doing many other things during this period, not to mention Dan's full-time job. Interestingly, Ray and Dan's clock was not the first version made—their good friend, Dr. Ira Anjoorian, built the first one while at his winter home in Puerto Rico in only a few months time during the winter and spring of 2002. His role in building the first prototype proved to be of great value, as he worked through various problems and helped with the perfecting of the patterns. Dan and Ray observe that with a project of this magnitude, crucial feedback often comes from individuals who are not closely associated with its actual design.

Dan and Ray used solid plywood for the cabinet and floors of their clock, and

solid hardwood for everything else. Dr. Anjoorian used plywood for his entire clock and mitered all the corners, which in itself was quite an accomplishment!

Interesting facts about the project

The clock is a six-level assembly that comes apart for ease of building and moving. The six sections locate on dowels and are fastened together with wood screws. The first level is the base, which was designed to be strong enough to support the great weight of the project. The overall dimension of the base is 31" x 49". A floorboard sits atop the base, and it has to be well fortified to support the other five levels; therefore, a fretwork box built from 3/4" material sits beneath the floorboard's center to provide the needed strength. This box is back-lighted to highlight the fretwork beneath the clock.

The second level (moving up) is the cabinet section, which measures 36" wide x 30" tall x 24-3/4" deep. The cabinet features two doors with multi-layered fretwork, and also has fretwork within the cabinet and on its sides, back, and top. This interior fretwork is

also enhanced by lighting.

Level three is the music movement level and its overall dimension is 31" x 49", with the body portion measuring 24" tall x 36" wide x 19-3/4" deep. It features six balconies, each with a music movement mounted behind a door. This level also features cathedral-style windows with fretwork vines and plants beneath each one. A semi-circular stairway with railing leads up to functioning double doors and two towers that could become a stand-alone clock with the simple addition of a clock movement. The floorboards on this level are trimmed with simulated "post-and-rope" fretwork, and



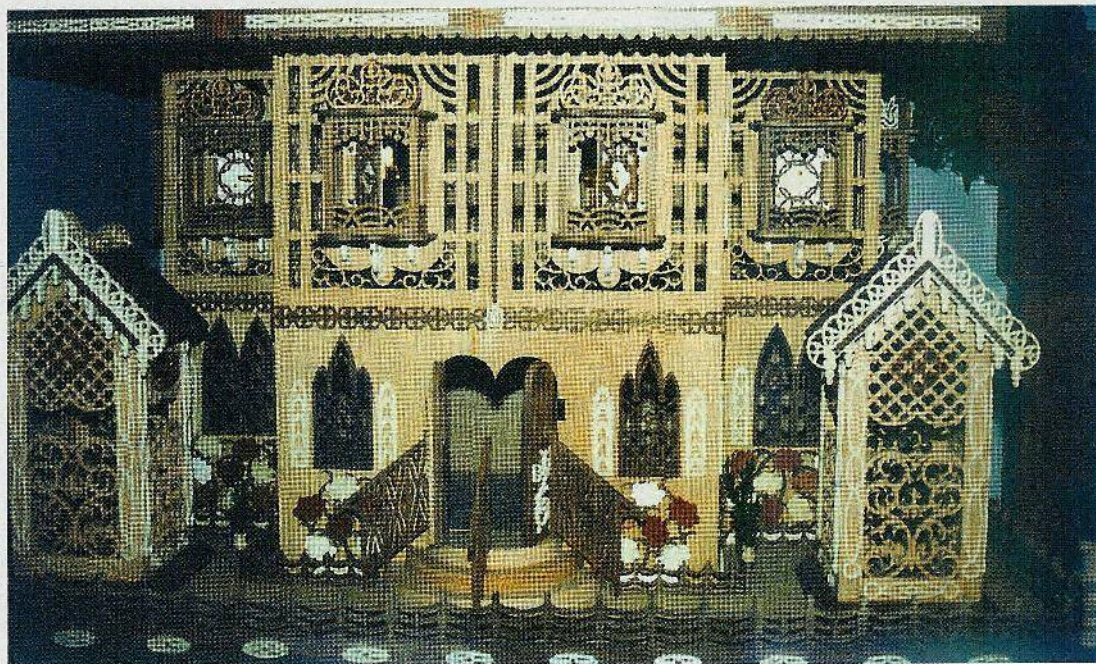
Even the inside of the cabinet section is replete with good-looking fretwork.

once again, backlighting is used with good effect.

The fourth level up is the pendulum level, which measures 18" tall x 30" wide x 14" deep, and rests on a 25-1/2" x 40-1/2" floor. This level features the pendulum opening with brackets and internal fretwork, two porches with functional doors, and once again, backlighting.

Level five is the weather instrument level and holds three instruments as well as a box measuring 21-3/4" wide x 6" tall x 11" deep. This box features 46 brackets made from contrasting hardwoods and is also backlit.

The sixth level, or "head section," may be the most impressive part of the clock. The body measures 16" wide x 18" tall x 11" deep, with the pediment and crown extending 4" beyond the roof. The head sits on a scalloped floor, and features brackets, balconies, dormers, and much more. Of special interest is the fretwork clock face—it has openings behind the cutouts and numerals that allow the light (from the backlighting) to shine through majestically.



The music movement level features cathedral-style windows, balconies, stairs with railings, and lots more.

Going forward

The Wilckens find themselves at a crossroads regarding this project—the big question is, will other people want to build it and, correspondingly, should Ray and Dan offer the plans and patterns to the public? On the "plus" side is the obvious fact that the Tower of Time is an amazing project worthy

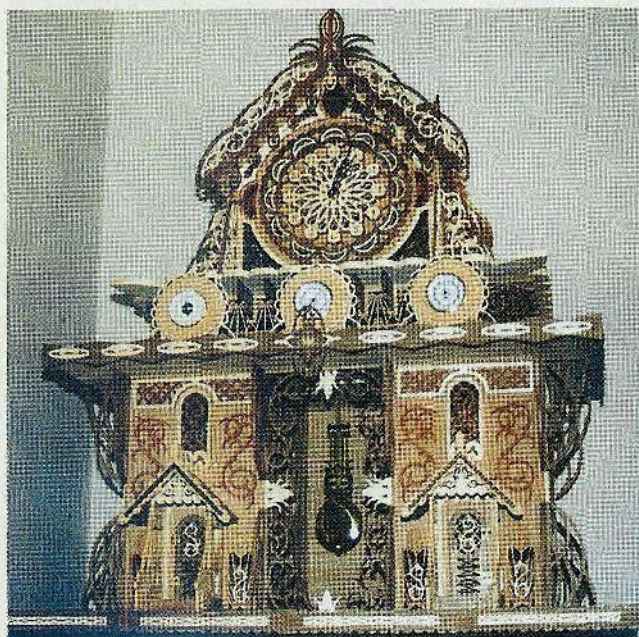
of respect and possibly even a museum showing. Further, the imaginative scroll sawyer will be able to discover many projects that can be made from the fretwork design of the clock. To cite a few ideas, several smaller clocks, shelves, boxes, and brackets can be turned into projects in their own right. The cabinet makes a fine fretwork television stand with storage for your DVD player, VCR, and stereo. Even when reduced by 50% it remains a large-scale project that would fit nicely into any home.

On the other hand, there are many factors that make publication a questionable venture—

first, there's the cost. The clock patterns require thirty-five "D"-size pages, each of which is 22" x 34"! Further, writing the instructions would be a monumental task requiring thousands of words and lots more paper. Then there's the size. Most ceilings are 18" too low for the clock, not to mention its 500-pound weight! Also, folks with small shops might find themselves challenged for space. The Wilckens have a medium-size shop and found themselves quite crowded at times while building the clock. In addition, one's health and strength might be a factor—the clock becomes heavy once the first level has been made, and it does need to be moved around to facilitate assembly. Add to all this the cost for the wood and other supplies, and you end up with plenty of questions!

So, the Wilckens need some feedback from you, the readers of *Creative Woodworks & Crafts*. They'd appreciate hearing from you to find out whether you think these plans should be made available. Maybe they will and maybe they won't, but there is one thing we know for sure—it's been fascinating seeing the Tower of Time and learning about its design, its construction, and its builders!

Wilckens Woodworking may be reached at wilkswood@aol.com or you can call (816) 373-0124, preferably evenings CST.



Front view of the top two sections.



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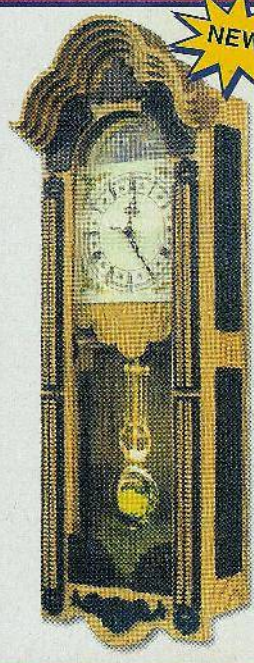
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Project!

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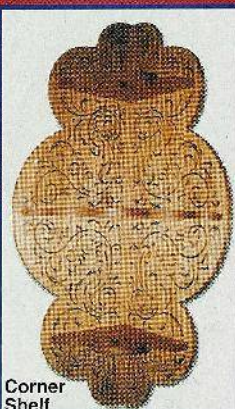
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Corner
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Year of the Horse

designed by Jacob Fowler, cut and finished by Wayne Fowler

Introduction

We live in a suburb of Toronto with a remarkable ethnic population mix, including a vibrant Chinese community. Every year around late January or early February a wonderful series of celebrations for the Chinese New Year occur at many locations around us. Dragon dancers, sumptuous feasts and gifts abound.

The Chinese use a lunar rather than a solar calendar, so the actual date of the new year changes each year. Associated with the calendar is the Chinese Zodiac, which is based on a twelve-year cycle with each year represented by an animal that imparts distinct characteristics to its year. Many Chinese believe that the year of a person's



and Rooster

birth is the primary factor in determining that person's personality traits, physical and mental attributes, and degree of success and happiness throughout his or her lifetime.

The twelve animals in the zodiac cycle are the rat or mouse, ox, tiger, rabbit, dragon, snake, horse, ram or goat, monkey, rooster, dog and boar or pig. Given the neighbor-

hood in which we live, we have seen many variations on the Chinese animal symbols and we decided to adapt these twelve animal symbols to scroll saw patterns. We make them in two sizes to sell at local craft sales, and early indications are that they will be a very successful sales item for us for years to come. Several of the symbols,

continued on page 22

SUPPLIES

Wood: hardwood (preferably cherry, mahogany, paduk or other red wood)—one piece $\frac{3}{4}$ " to 1" thick x 8" x 7" (for horse) and one piece $\frac{3}{4}$ " to 1" thick x 6" x 7" (for rooster); complementary $\frac{3}{4}$ " hardwood (e.g. oak)—one piece $3\frac{1}{2}$ " x $6\frac{1}{2}$ " (for the rooster base) and one piece $3\frac{1}{8}$ " x 8" (for the horse base); thin dowel—approx. 2, (optional)

Tools: scroll saw with a No. 2R and/or 5R blade; fixed disc or belt sander with fine or extrafine (120/220) disc or belt; access to photocopier

Temporary-bond spray adhesive such as 3M 777 adhesive

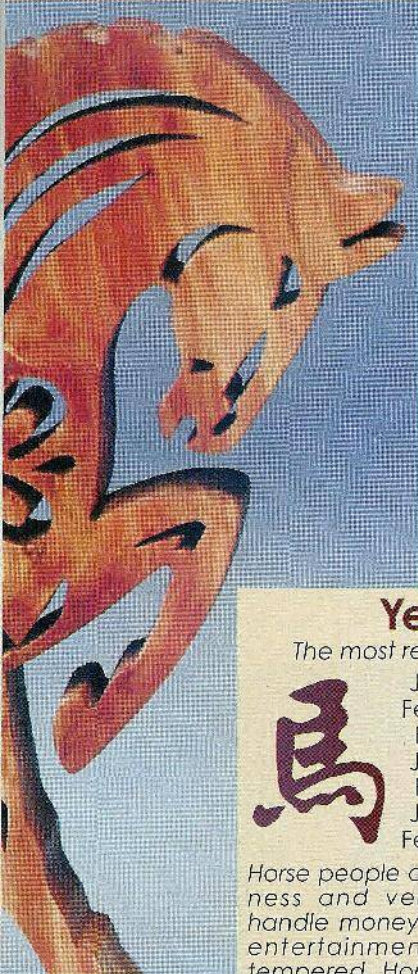
Clear packing tape

Sandpaper— $\frac{1}{4}$ sheet of 220-grit

Glue

Finish of choice





continued from page 21

including the horse and rooster, also sell to collectors of the specific animals.

The horse and rooster patterns that we are publishing here are the large base-mounted versions. They can be reduced on a copier to 60 or 50% and cut out of 3/4" wood to make small gifts for those horse and rooster people out there. Before we start, here's a little bit of Chinese astrology that you can pass on to the recipient of the finished horse or rooster:

Year of the Horse

The most recent lunar years for the horse are:

馬

January 30, 1930 to February 16, 1931
February 15, 1942 to January 4, 1943
February 3, 1954 to January 23, 1955
January 21, 1966 to February 8, 1967
February 7, 1978 to January 27, 1979
January 27, 1990 to February 14, 1991
February 12, 2002 to January 31, 2003

Horse people are often popular due to their cheerfulness and verbosity. Wise and talented, they handle money matters well. They enjoy crowds and entertainment but are independent and short-tempered. Horse people are most compatible with Dog and Sheep people; least with Rat people.

INSTRUCTIONS

Cutting and Construction

The best color for Chinese characters is red, followed by gold; woods like paduk, cherry or mahogany would make great red pieces and something like Tree of Heaven, if you can find it, would work for gold. For base-mounted pieces, use 3/4"- to 1"-thick wood.

Make a photocopy of the pattern and glue it to the wood. I recommend using clear packing tape on top of the pattern to reduce the burn from the tight turns you will have to make when cutting the pattern. For cutting, I recommend a No. 5 or No. 2 reverse tooth blade to reduce chipping on the bottom of the piece.

After you have drilled the guide holes and cut out the fret pieces, use a solvent such as paint thinner to remove the paper pattern and let the piece dry before you sand the two faces and the four edges on a disc or belt sander. I find that then using a 1/4 sheet of 220-grit sandpaper is a good way to remove any remaining burs and to lightly round the edges in order to yield a more finished look. Clean the piece

using your tool of choice (I use a clean paintbrush).

The oval base can be cut from complementary 3/4" hardwood. Oak is usually a good match for a red wood, or you could just use more of the same wood that you used to make the piece. I find that the base looks much more finished if I use a router to round it after I have cut it, but you could just use sandpaper to take the edge off the top of the base.

Mounting on the base – two methods

There are two methods that I use to mount the finished piece to the base. In the first, the pattern is marked to show where dowels can be inserted in the piece and base for the best display. Carefully drill a hole for the dowel in the bottom of the piece and the base. I would recommend using something like a 1/8" dowel if you can find it; a piece of a nail of a similar size could make for an even stronger connection.

Glue the finished piece, the dowel and the base together and clamp (I use big elastic bands) the assembled piece in the correct pose, making sure that the animal is standing true to either side as well.

A second method that I have used is to draw a tongue, roughly 1/2" long, at the base of the horse or rooster in the same direction as the dowel line before I cut the piece. Then, I fit that tongue into a hole I cut in the base after I trace the footprint of the tongue on the base and fret cut the hole out. This will work if you are making the piece out of strong hardwood. However, if you can make the dowel attachment work, I recommend going with that method.

Finish the base and animal with a thin oil to seal the inner edges (I use either walnut or tung oil). Apply multiple coats after fine sanding to get a better finish, if you wish.

The finished horse and rooster shown in the picture were made using red box elder burl from a local Ontario tree, but that is another story!

Send questions concerning this project to: Wayne Fowler, 33 Longmeadow Cres, Markham, Ontario, Canada L3R 3S6. Email: wfowler@allstream.net



Year of the Rooster

The most recent lunar years for the rooster are:

雞

January 26, 1933 to February 13, 1934
February 13, 1945 to February 1, 1946
January 31, 1957 to February 17, 1958
February 17, 1969 to February 5, 1970
February 5, 1981 to January 24, 1982
January 23, 1993 to February 9, 1994
February 9, 2005 to January 28, 2006

Determined and ambitious, Year of the Rooster people often undertake tasks beyond their capabilities. They are bold and outspoken, often distrustful of others but capable of having loyal friends. They are best suited to those born in the Year of the Ox, Serpent or Dragon; worst suited to Year of the Rabbit people.



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Finding and Using

LOCAL

Introduction

In the past few weeks I have finished scroll saw projects made from box elder, eastern cottonwood, willow, horse chestnut, elm, apple, mulberry and pear woods. All of these woods came from local Ontario trees that were not harvested or clear cut but rather recovered from farmer's fields, town dumps and construction sites. All of the finished pieces are beautiful and most of them sold at a sale this past weekend. My main supplier describes what he sells me as "guilt-free wood." I consider wood selection to be one of the key factors that makes my work unique, and it certainly helps to sell it.

This is not the kind of wood that you can normally buy at a local lumber yard. Nonetheless, I have been able to find wonderful local woods in several states and all over Ontario, so these and other woods can be found. The rewards are numerous, including the ability to use the unique characteristics in the wood to highlight the patterns' features, great stories to tell people who are the recipients of the finished work, and a low-cost supply of wood.

What To Expect

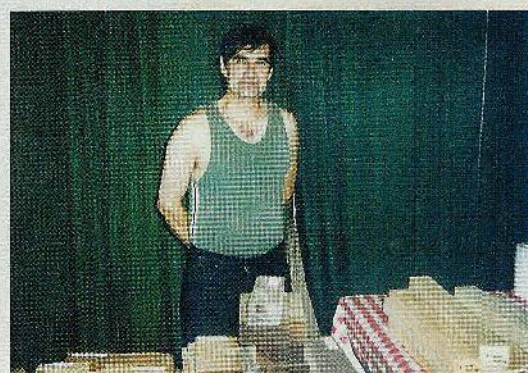
Local woods are usually not cut to standard widths, thicknesses or lengths. This can make them a poor choice for furniture but great for most scroll saw work. On occasion, I have also found the wood to be finished on one side only. Again, for scroll saws this is fine and it very often leaves interesting features (such as the bulges on willow trees or the stress marks on crotch pieces) intact for use in the designs. There is also a greater risk of flaws in the wood since the trees are not usually harvested in their prime, are not cared for, or have spent some time lying in fields or dumps. Sometimes the tree's centers are rotten and the finished boards have to be trimmed back to solid wood in order to be safe for cutting. However, on balance, the risks are well worth the rewards.

Some Examples of Great "Junk Wood"

Box elder or Manitoba maple

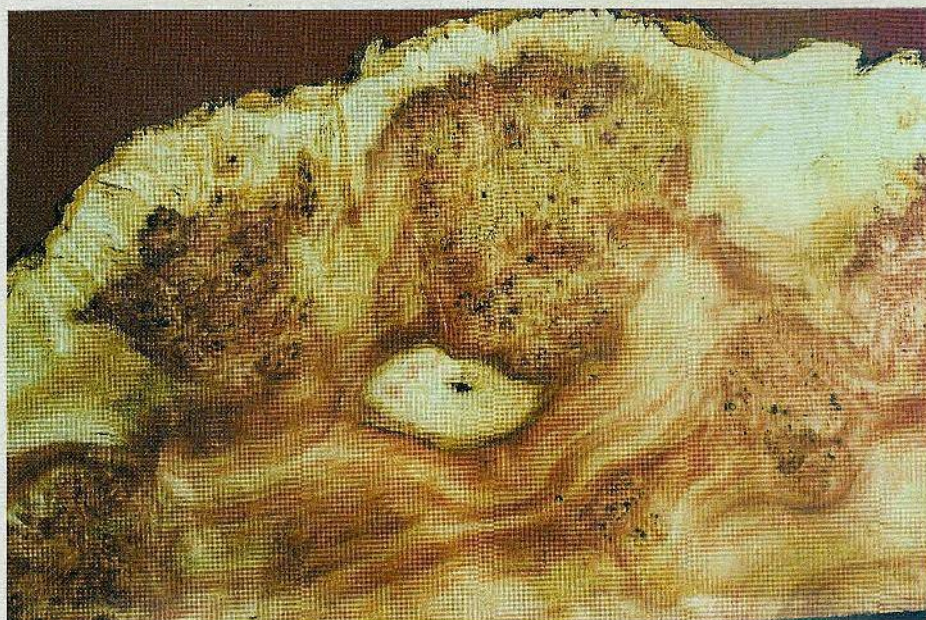
This is an excellent wood if you can find it. In its basic form, it is a fairly plain white wood with very faint grain. Sometimes I am able to find pieces with burl or stress marks from branches, and at other times red streaks that are great for fire effects in dragon patterns. I have also found pieces with blue streaks from nails that have been dissolved by the tree over a period of years and, if the tree is cut in late spring, yellow sap wood just under the bark. All of these features can be used to make your finished product unique.

Recently, a friend of mine, Edgar Werner, who operates as Durham Wood Products, found a box elder tree in a farmer's field that had a section with a soft center but great red burls. To be safe, and to give



Wayne's friend, Edgar Werner, found the box elder tree that has the beautiful coloration shown in the other two photos in a farmer's field. This same wood was also used in the Year of the Rooster and Horse projects in this issue.

them strength, he cut the tree into planks just over an inch thick and sold me about eight planks. The pictures



Box elder detail.

Box elder detail.

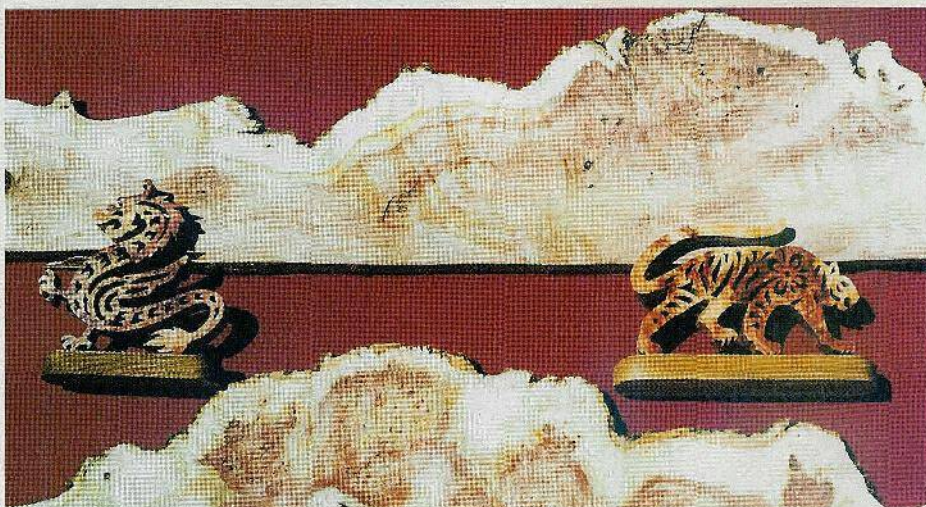
WOODS

by Wayne Fowler

show one of the planks and two finished pieces from a sister plank. The close-up shows some of the detail in the plank. Because of the potential weaknesses in the wood, I will be using it to make more of the types of projects shown in the picture, large pieces with simpler fret cutouts. The sheer beauty of the wood will make the finished piece very easy to sell.

Box elder, particularly the burls, cuts very smooth and takes a finish of natural oils to a great low lustre with multiple applications. Because I have a great supplier, I probably do about half of my work in this wood.

Red box elder shown with Chinese dragon and tiger projects.



Eastern Cottonwood

The eastern cottonwood boards shown in the next three photos were cut by Edgar from a log in a town dump. The

log was a very thick crotch piece and, as a result, had great character. I have used other boards from this log to cut bird

pieces, as the effect of the crotch looks very much like the feathers of a bird. The piece in the picture uses the same feature



This magnificent elephant owes much of its beauty to the crotch piece of Eastern cottonwood from which it came.



Eastern cottonwood crotch pieces, shown with corresponding projects.

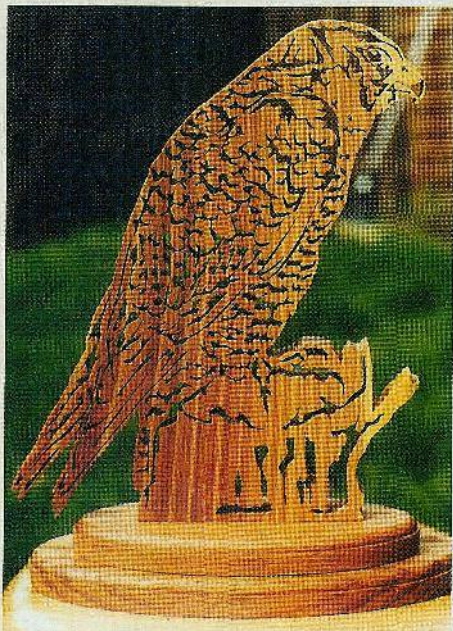
effectively to look like scales on the snake. I have received a number of very positive comments on the finished work. The wood cuts slightly rougher than box elder, but generally I get a very smooth effect in my finished projects.



Eastern cottonwood owl.

Red/Grey Elm

I thought that there were no more elm trees as a result of Dutch elm disease, but



The wide end of this red elm plank is almost 20" across and has great character.

Edgar has found several in his local area, including grey and red elms. Elm has strong banded grain, which works well with wildlife patterns. One of the pieces had a yellow sap wood band that I was able to use on several fret bird beaks. The plank shown with the peregrine falcon is an example of what you gain by the boards being finished on two sides. The end of the triangular board is almost twenty inches across and has great character.

Sources

My four key sources of information about local wood suppliers are woodworkers' shows, the Yellow Pages, other craft and scroll saw people, and the Internet. Edgar only sells his products at Canadian woodworking shows, but I have encountered others like Edgar at local shows in Ontario. Usually, these suppliers are local sawmills that rent a booth at the show and bring everything from standard boards to slices of trees that would make beautiful coffee tables.

The Yellow Pages are a great source of suppliers when you are on vacation or travelling. I discovered a while ago that the entries under "sawmills" are a far bet-

ter source for local woods than the more traditional lumber of "wood" entries. The entries also give you a chance to call in order to see if they sell individual boards or have a "remainders" bin and, most importantly, where they are located as they are usually in the countryside.

I often visit craft sales when I see them while travelling and look for ideas for wood crafts. I also look at what wood the crafters are using and ask them where they got it. If you aren't a local, there is a greater chance that they will tell you. When in Yuma, Arizona, recently, I met someone who was using grapefruit to make jewelry and he told me about his local supplier, the Lumberlady (<http://www.lumberlady.com>), who sells on the Internet as Hardwoods of Yuma. She is a great source for mesquite, grapefruit and many other desert woods.

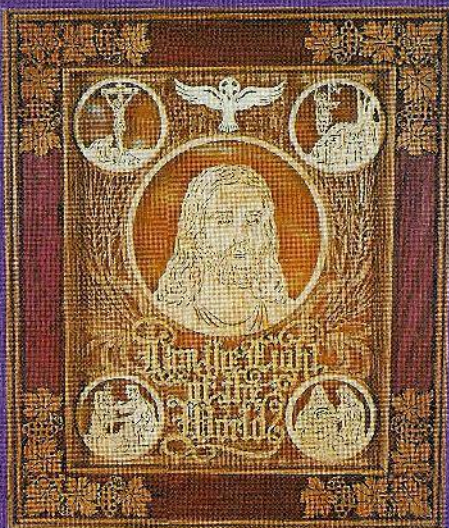
When I am travelling, I use search engines, online Yellow Pages, as well as www.woodfinder.net on the Internet to find local suppliers. I am going to California soon and hope to visit East-West Urban Forest Products, which I found both through search engines and Woodfinder. They claim to sell recycled local wood and I am very excited that I will soon be working in avocado and sycamore. Good hunting to you!

If you have any questions please feel free to e-mail me at wfowler@allstream.net

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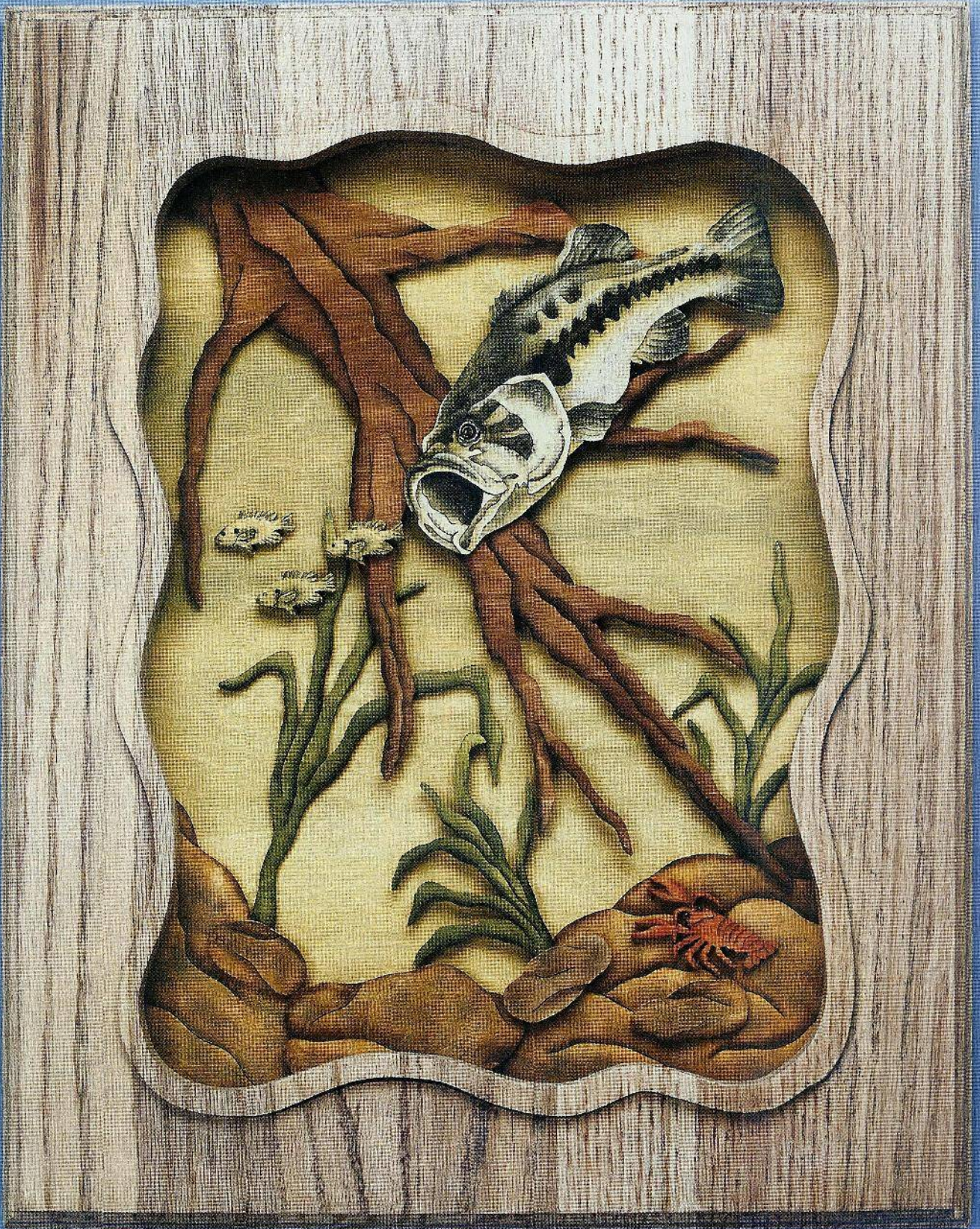
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The Predator

by Sheila Bergner of Toys in The Attic



INSTRUCTIONS

Make the Captured Frame

Saw the 1" oak board to the proper dimensions (16" x 20"). Rout the outside edge of the board using a decorative bit of your choice. Sand the board smooth. Transfer the frame pattern to the wood, making sure it is centered. It is helpful to apply a layer of clear packaging tape over the oak to help prevent burning of the wood. Drill a hole in the center waste area using the 1/16" drill bit and then use a No. 7R scroll saw blade to cut out the inside of the frame. Keep the waste piece for another project.

Drill an entry hole as indicated on the pattern and thread your blade through it. Tilt your saw table 4° to the right (with the right side of the table being lower than the left) and saw around the outer line of the captured frame in a clockwise direction.

Once you have finished cutting, push the interior ring from the back side of the plaque until it locks into place. Apply wood glue to the back side of the ring to secure it in position. When the glue is dry, apply several coats of clear polyurethane in the finish of your choice to the frame.

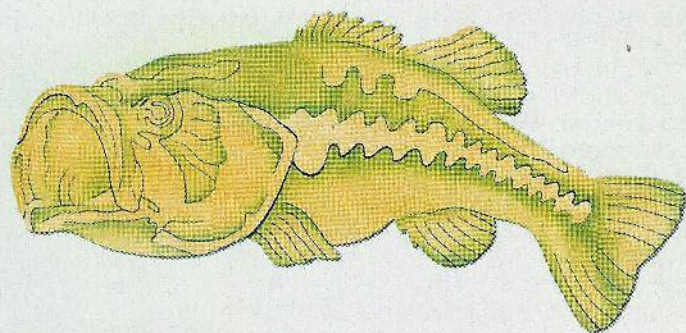
Cut the Pattern Pieces, Spacers and Backboard

Make photocopies of the original patterns and keep them for future reference. Apply a light mist of temporary spray glue adhesive to the pattern pieces and wait a few seconds for it to tack up (it should have the same feel as masking tape). Apply the pattern pieces to the 1/8" birch plywood. Cut out the pieces using the 2/0 reverse tooth scroll saw blade. Make the inside cuts first in order to retain the most support for the pieces. The spacers are indicated as S1, S2, etc., on the pattern sheet. The placement of the spacers is indicated on the pattern pieces with dashed lines. These lines are for reference only and are not to be cut. Cut out the backboard so that it measures 15" x 19".

Paint the Project

Most of the painting for this scene uses a wash technique. When applying a wash, use a mixture of approximately half water and half paint and strive for a semi-transparent tinting. Refer to the step-by-step photographs frequently when painting your fish. It is also helpful to follow the scroll-sawn lines when adding details to the fish.

Largemouth Bass



Step 1. Wash the entire fish with Olive Yellow using the No.

SUPPLIES

Wood: *red oak*—one piece 16" x 20" x 1" thick (for the frame); *birch plywood*—one piece 15" x 19" x 1/8" thick (for the backboard), one piece 18" x 24" x 1/8" thick (for the scrolled pieces and spacers)

Tools: scroll saw with reverse tooth scroll saw blades in sizes 2/0 and 7; drill with 1/16" bit and countersink bit; router with decorative bit (for edging of frame)

Six flat head brass wood screws, size No. 6 x 1/2"

Temporary-bond spray adhesive

Sandpaper, assorted grits

Clear drying wood glue

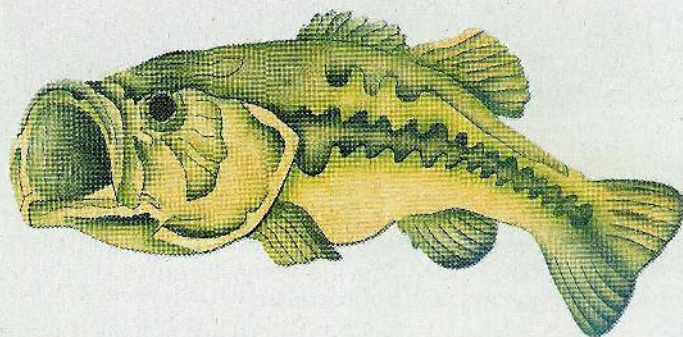
Sawtooth hanger

Delta Ceramcoat Acrylic Paints: Autumn Brown, Black, Black Green, Brown Iron Oxide, Buttercream, Dark Burnt Umber, Georgia Clay, Golden Brown, Lichen Grey, Medium Foliage Green, Olive Yellow, Timberline Green

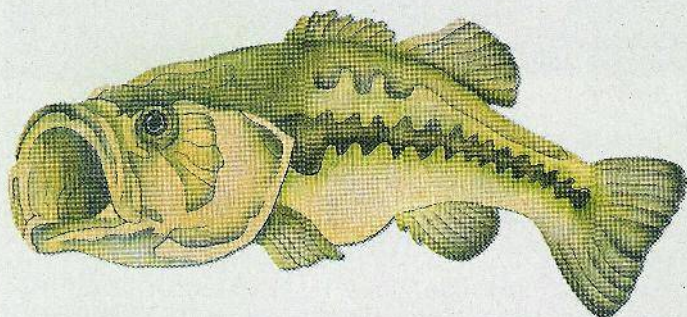
Loew-Cornell Comfort Series Paintbrushes: Series 3300 No. 10 Shader, Series 3850 1/4" Deerfoot Stippler, Series 3350 Nos. 18/0 and 1 Liner, Series 3400 Angular Shader, and Series 3550 1" Glaze/Wash

Spray varnish and clear polyurethane in the finish of your choice

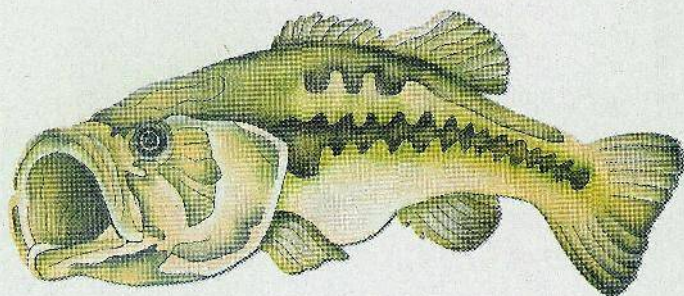
12 flat shader brush. Using the angular shader with paint only on the tip of the brush, wash Medium Foliage Green where the fins meet the body, behind gills, around the center stripe, under the upper spots on the back, on the ends of the fins, across the top of the fish, on the top of the head, in the eye area, on the inner gill area, and inside the mouth.



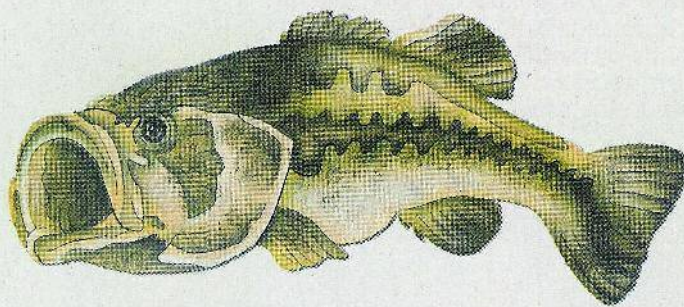
Step 2. Using the angular shader and the same method as above, wash Black Green along the side stripe, over the spots on the upper back, along the top of the head and back, around the fins, on the ribs of the fins, inside the mouth, on the gills, under the chin, and around the mouth. Use the No. 1 liner and Black to paint the eye.



Step 3. Use the No. 18/0 liner and Lichen Grey to paint around the eye. Use the deerfoot to stipple Lichen Grey on the belly, tail, fins, gills and the light areas of the mouth.



Step 4. Use the No. 18/0 liner to dot in the highlights of the eye with Buttercream. Use the angular shader to wash in Buttercream highlights around the gill, around the eye, around the mouth, on the fin and tail ribs and on the belly of the fish.



Step 5. Use the 1/4" deerfoot to stipple in some highlights with Lichen Grey. Use the same brush to stipple in Black Green shadings. Finally, use the same brush to stipple in some final highlights with Buttercream.

Finishing

Spray the individual pieces, as well as the backboard with several light coats of spray varnish in the finish of your choice.

Painting the other parts:

Seaweed

Use the No. 10 shader to basecoat the seaweed with Medium Foliage Green. Use the angular shader to shade the seaweed with Black Green. Use the deerfoot to highlight the seaweed with Olive Yellow.

Branch

Wash the basecoat on the branch with Autumn Brown. Shade the branch with Dark Burnt Umber.

Rocks

Wash the base coat on the rocks with Golden Brown. Shade the rocks with Brown Iron Oxide. Stipple the rocks with Brown Iron Oxide, Lichen Grey, and Medium Foliage Green.

Crayfish

Wash the basecoat on the crayfish with Georgia Clay. Shade the crayfish with Brown Iron Oxide. Dot the eyes of the crayfish with Black. Add tiny highlights to the eyes with Buttercream.

Feeders

Basecoat the feeder fish with Medium Foliage Green. Shade the feeder fish with Black Green.

Backboard

Use the large wash brush to wash the background with Timberline Green.

Assemble the Scene

Note: all the parts for assembly are clearly marked in the full-size pattern pullout. Glue spacers S1 thru S5 on the back of the branch piece as indicated on the pattern. Glue spacer S6 on rock No. 3 and S7 on rock No. 5. Glue spacer S8 on the left side of one of the feeder fish. Glue the spacers S9 to the FRONT of the backboard on the four corners, and to the centers of the right and left edges.

Referring to the color photo, layout rocks No. 1 and No. 2 onto the backboard and make sure they are under the ring of the frame. Glue into place. Glue rock No. 3 into place. Glue the three seaweed pieces into place, directly onto the backboard. Glue rocks No. 4, No. 5 and No. 6 into position on top of the other rocks. Glue the large branch into place, fitting the top end under the ring of the frame. Glue the fish onto the branch and the backboard. Glue one feeder fish on the branch, one feeder fish (the one with the spacer attached) onto the backboard and seaweed, and one feeder fish directly onto the backboard. Glue the crayfish into place.

Apply glue to the six spacers (S9) on the front of the backboard. Carefully position the frame on top of the backboard. Weigh down and allow to dry. Turn the picture over and drill pilot holes through the spacers. Use a countersink bit and drill each hole. Insert screws until they are flush to the backboard. Attach the sawtooth hanger and you are ready to display your scene with pride.

For questions concerning this project contact Sheila Bergner, (708) 532-5624. Email: Scrollgirl@comcast.net



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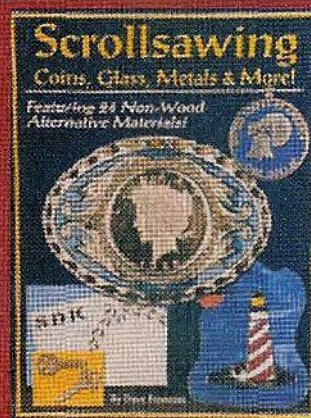
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Smallmouth Bass

by Thomas J. Mullane, Jr.

Patterns Located in Full Size Pattern Section No. 1

Introduction

To those who have never entered a scrolling competition, let me tell you it is a humbling experience. I was feeling real good about the 3 pieces on which I had worked so long and hard (this project was one of them). That is, I was feeling real good about them until I got to the 2003 Pennsylvania Scroll Saw Picnic and saw the other pieces that I was going to compete against. Well, I had come this far and I was not going to turn around and put the work back in my truck... if nothing else I was going to see how well my somewhat meager talents for design and scrolling were going to be judged. One of the first things I found out was that you have no say in what category your work is going to be placed. Two of my pieces were placed in the Intermediate Fretwork category and the other in the Basic Fretwork category. I still don't know what separated that one piece from the others, but in any case I was still up against some outstanding examples of the scroller's art.

To make a long story short, I was absolutely beside myself when I found out that two of my entries had won ribbons: third place finish in the Basic category and a first place finish in the Intermediate category for my Smallmouth Bass. The other piece did not place at all, and that was the one I was sure had the most potential. Just shows what I know about art!

Prior to the competition, I had talked to some people who had

judged scrolling competitions in the past in order to get an idea of what I needed to do to be competitive. I found out that the finish is as important as the cutting and pattern. In

fact, even if the pattern is extremely complex and the cutting is absolutely dead-on perfect, if the finish leaves even a little bit to desire, don't count on being in the winner's circle. And "finish" refers not just to how the face of the project looks. The judges took a long hard look into the frets to make sure there were no rough edges or fuzzies remaining at the back. Considering the work that was there, I did not envy them their job. But let's get on to how I prepared the stock from which I cut my Smallmouth Bass pattern and then we'll move on to the final finishing. Just because you are not going to enter the piece in a contest does not mean you can't put the best possible finish on it.

SUPPLIES

Wood: walnut or wood of choice—one slab 1/2" x 10-1/2" x 16"

*If using plywood, I would recommend a 1/4" thickness to better support the small hangers.

Tools: scroll saw with blades of choice (my preference is Flying Dutchman spirals for slab work or Flying Dutchman FD-SR blades for all other projects); drill with drill bits sized to blade used; palm sander

Masking tape

Temporary-bond spray adhesive

Sandpaper in 80- to 220-grit (for finish sanding)

4/0 steel wool and 600-grit wet/dry sandpaper (to smooth the lacquer finish)

Boiled linseed oil, amber shellac and lacquer or finish of choice (for finishing)



INSTRUCTIONS

This piece shown in the color photo was cut from a 24" x 14" x 1/2" slab of old growth walnut. However, pattern space in this magazine has



its limitations, so I have provided a reduced version which will comfortably fit on a 10-1/2" x 16" piece of wood. Actually this pattern can be cut as small as 8" x 10" if you take your time and are careful. I do something a little different than a lot of scrollers when preparing stock to scroll. I pre-finish the stock until it is ready for the final coating and then I cut the pattern. In this case, that meant sanding from 80- to 220-grit, making sure to remove all sanding dust between changes of grit. Then, both sides of the piece were given a coat of a 50/50 mix of boiled linseed oil and mineral spirits that was allowed to soak in for an hour and was then wiped off. The piece was allowed to

air dry for two days and then the process was repeated. Walnut has a cool color when finished with lacquer (my preference for all hardwoods) and I wanted a warmer tone to this piece. To get what I wanted, I next applied two coats of a 2lb. cut of amber shellac and allowed that to dry for two days. This gave the wood the warmth I was looking for without blocking out the beauty of the walnut.

I was now ready to start cutting. I covered the wood with a layer of masking tape and then applied the pattern using a temporary-bond adhesive. The masking tape helps to eliminate edge burning on the thick stock, and I find it also helps to remove the pattern and leaves no glue residue to clean up. I used my Dremel tool to drill the appropriate guide holes for my blades, and it was off to my saw. Rarely can stock of this size be spun around the average scroll

saw table. Some scrollers get around this problem by starting a cut and then removing the blade and beginning from the other side of the cutout. I prefer to use spiral blades. My blade of choice is the Flying Dutchman FD-SP in sizes 3 and 5 for stock of this thickness. Spirals can be tricky; I recommend practicing on scrap wood until you get the hang of them. On thick stock like this, take your time and let the blade do the work. If you try to rush, you will get rough edges and lots of broken blades. I generally start cutting from the inside and work my way out. It is a habit that I have gotten into and for me it works. I find that in the later stages I have finger grips to help guide the wood around the blade.

When all the cutting is over, sit back and rest... you deserve it. Besides, you still have a lot of work to do. Now it is time to turn the piece over and make sure all those little fuzzies are completely removed. You don't want even a trace of one left on the back. I accomplish this with my palm sander and 80-grit paper. I move the sander over the back without putting too much pressure on it; you don't want to break off any of the delicate hangers that are on the cutting. The motion of a random orbit sander can break pieces off the finished work, so the use of a palm sander is recommended. After a thorough sanding, I then turn to a sharp utility knife in order to remove those little fuzzies that seem to resist all other efforts at removal. I use the edge of the knife to gently scrape away the fuzzies at the edges of the cuts and then sand again with 80-grit paper. Once I am sure all the fuzzies are gone, I give the back a good brushing to remove all sanding dust and then use my compressor to blow off the back, front and insides of the cuts. You want the piece to be absolutely dust-free at this point.

You are now ready for the final finish. Using 4/0 steel wool or the finest grade of synthetic steel wool, give the front a light scuffing and again blow away any dust. Then give the piece at least three coats of lacquer. I prefer using a high solid lacquer with a gloss finish. I rub it out to a semi-gloss. When the lacquer is completely dried, about 5-7 days depending on the temperature and humidity, I then give it a very light rubbing with 600- or 800-grit wet/dry sandpaper lubricated with water (keep a spray bottle nearby to keep the surface wet). This will level the surface and give you a nice semi-gloss finish. Do not overdo this process or you will sand through the lacquer and have to start all over again. Clean off the dust and lube and you are finished with the front.

The backing can be anything you like. On this particular piece, I used a piece of olive variegated felt that was glued in place with Aleene's Tacky Glue. Install your hangers and put the piece on the wall. Sit and relax and stare at it for hours. You deserve it... you just created a piece that could win a scrolling competition!

For questions concerning this project, send an SASE to: Thomas J. Mullane Jr., 20781 Millers Church Road, Hagerstown, MD 21742. Email: oldgriz@oldgriz.biz.





Night Stalker

by Denise Green of Daeden Woodworks

Patterns Located in Full Size
Pattern Section No. 2

SUPPLIES

Wood: wood of choice—two pieces approximately 1/4" thick x 9-1/2" x 12" (can be different types of wood or the same type finished differently); Backer of choice (bristol board or thin plywood), approx. 9" x 11"

Tools: scroll saw with blade size of choice; drill with bit of choice

Temporary-bond spray adhesive

Masking tape

Sandpaper, assorted grit

Wood glue

Finish of choice

Hanger of choice

INSTRUCTIONS

Photocopy both the owl and leaf overlay patterns. Attach the leaf overlay pattern to the selected stock with spray adhesive. Next, place the leaf overlay stock (with pattern attached) over the second piece of stock and tape together on all edges. Cut the outer border of both pieces simultaneously. Separate the pieces and attach the owl pattern to selected stock with spray adhesive. Drill holes in waste areas of

patterns. Make cuts in all smaller areas first. Thoroughly sand both pieces. Apply finish of choice. Let dry thoroughly. Glue stock together. Cut backer and glue to back. When dry, attach the hanger. Hang and enjoy.

Send questions concerning this project to: Denise Green c/o Daeden Woodworks, RR1, 384870 Salford Road, Burgessville, Ontario, Canada N0J 1C0. Email: daedenwoodworks@hotmail.com



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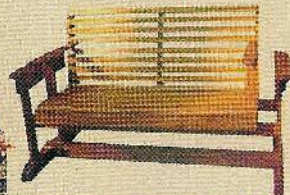
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Rick Hutcheson's SHOP

by Wes Demarest



Introduction

I first met Rick Hutcheson at the "Ultimate Woodcrafting Festival" in '99, here in New Jersey. He was traveling with his friends, Roy King, Scott Kochendorfer, and Shelia Bergner. During one of our conversations I heard him referred to as "The Animal" and even though I was curious as to how he got that name hung on him, I felt out of

place asking. It wasn't until I got this assignment and went to his shop in Grimes, Iowa, that I discovered why he got the name.

Everyone that had been there warned me that I would be amazed with his "shop." Amazed? Dumbstruck would be more like it! It is not just a shop, but also a classroom, museum, and computer

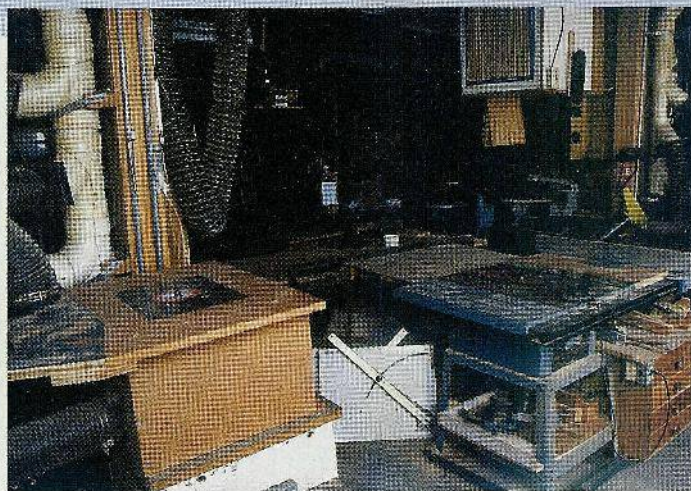
design center.

There are two things that make up a shop: space and layout. Ultimately, a shop should be planned around workflow, and here at Rick's it starts at the right front of the building. As you enter the right side you are in the breakdown area. That is where lumber or sheet goods are brought in and cut into working sizes.

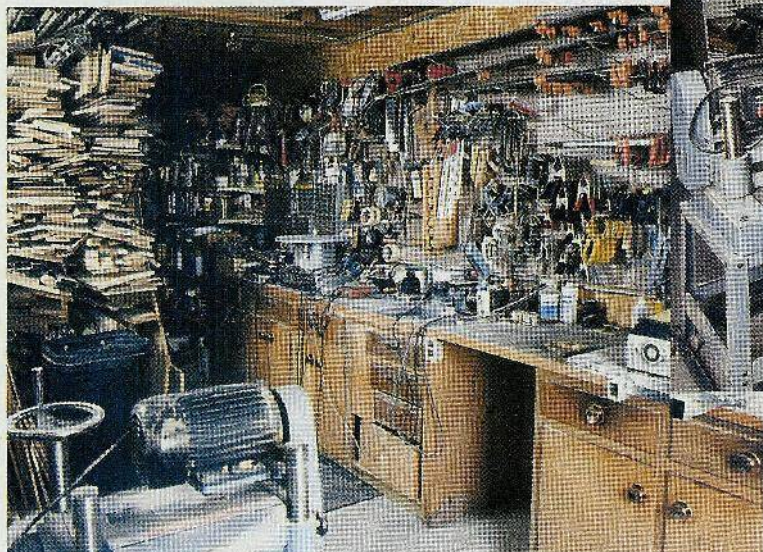
Touring Rick's Shop



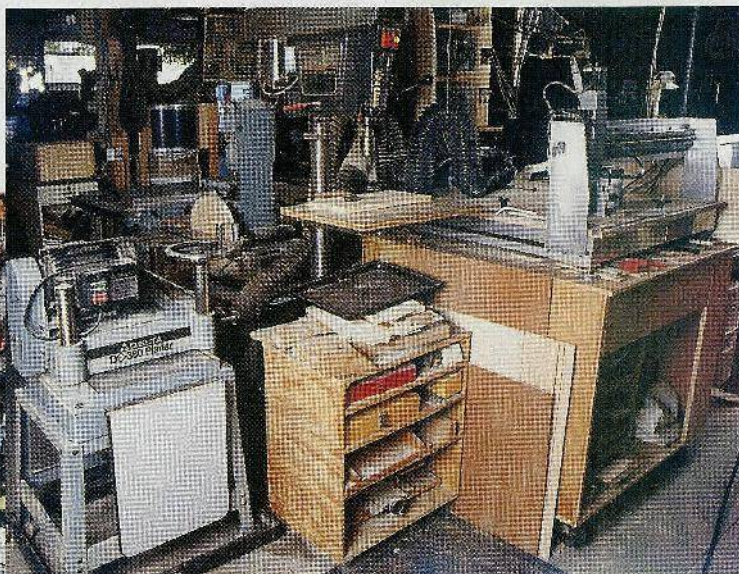
The right bay of three bays contains a long workbench with plenty of drawers and cabinets, while the wall is well-adorned with tools hung on pegboard. Mechanical tools are toward the front, woodworking tools are toward the back, and all are organized as to their use. Rick is self-sufficient and does most of his own plumbing, electrical and mechanical repairs, thus the wide assortment of tools and supplies.



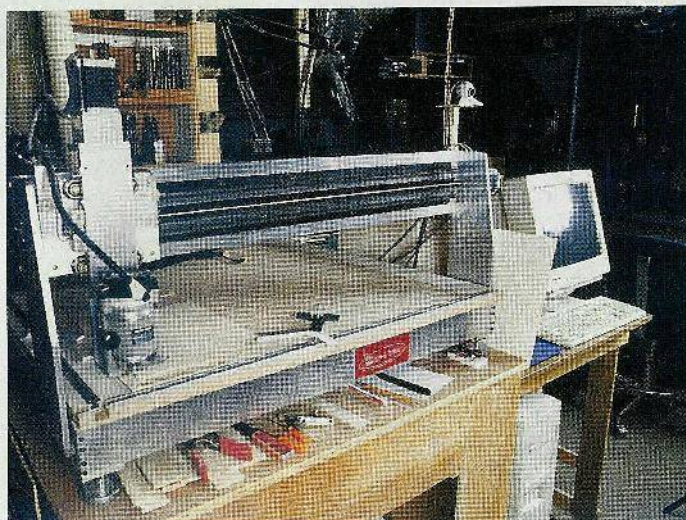
The left side of the same bay houses his heavier tools, such as the table saw, router table (shop-built by Rick), planer and jointer. Notice the network of dust collection hoses and dust collectors.



The back of the shop has a large storage section. The finishes and lumber are visible, but behind those racks are plumbing, electrical and other assorted maintenance supplies, all neatly stored.



As you move around the back of the bay, you pass between the entrance to his office and his CNC router, a Route-a-bout that is being developed by a friend of his and is giving Rick countless hours of fun. He can take any scroll saw pattern, scan it into his computer, do his magic in the program, load it into the CNC computer, clamp a piece of plywood in place, turn it on, and in minutes has a sellable project.



No laser burns, and with a 1/32" router bit you can hardly tell that it was routed. The only difference between this and scroll sawn work is that the router makes perfect cuts!



Rounding the corner, you enter scroll saw alley, the area where Rick does his cutting and teaches scrolling.



When you look back in this bay, you can see his office (which is behind glass) and a rack containing an assemblage of finished and partially finished projects along with scraps of all sorts, the essentials of teaching and demonstrating.



This is the same bench from a different angle. Notice the lathe in front of his office window. He admits that he does not do a lot of turning.



As in most shops, no space is wasted in Rick's. He has a number of finished sayings available for quick shipment and some of his original clockworks made from his patterns. No, they were not cut on the CNC router! Rick got his nickname in part because of the amount of scroll sawing he has done for profit. He is a tireless cutter, becoming totally engrossed in his work to the point of not eating or sleeping. He has cut for more than 24 hours without stopping to fill an order, and his normal workday is a minimum of 12 hours, during which he lives on Pepsi and cigarettes. While we were at his shop photographing this series of articles, we worked under that regime; the only break I held out for was to eat lunch and dinner. I don't drink many carbonated beverages, but drinking a pop every hour does have its merits. Luckily I did not take up smoking or return to chewing. We never did see Rick go to bed; I think he sleeps sitting up in his shop. He may be an "animal," in terms of work ethic, but as a person, you couldn't ask for a nicer guy. Rick gets as much pleasure from teaching a willing student as the student derives from the knowledge.

continued on page 40

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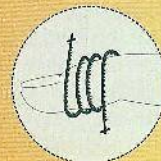
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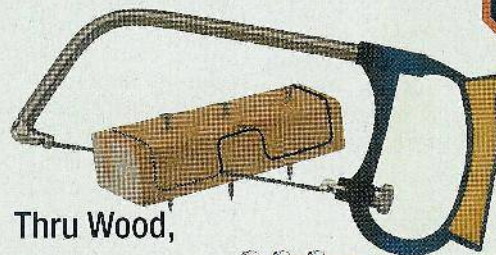
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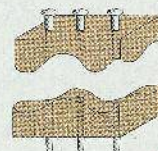
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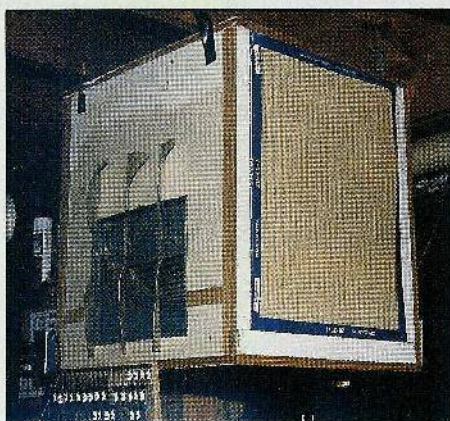
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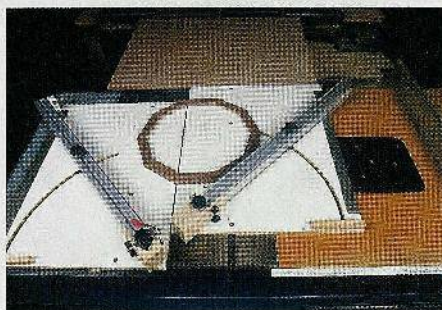
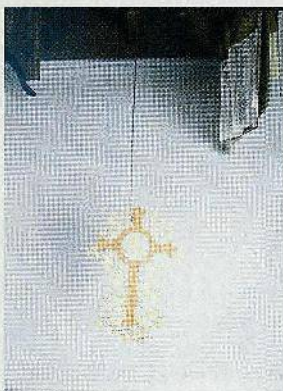


Rick's personal touches that really help the work flow:

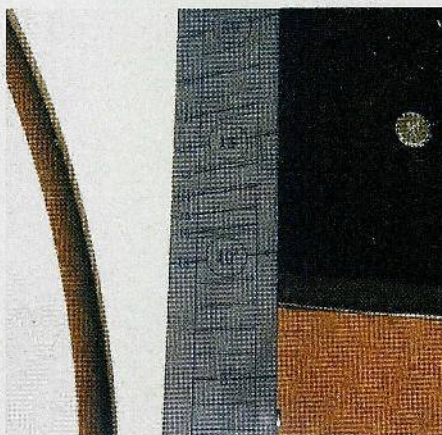


Also contributing to the success of a shop are those jigs and accessories that make work easier, more accurate, or safer. Here Rick has put together a dust collector that uses furnace filters to help clean the air. With dust collection, a central collection system cannot produce clean, healthy air on its own. A mounted ceiling unit or two are needed to remove the very fine, nearly invisible particles that are the most harmful.

Rick has been photographing his work for a number of years and has now gone totally digital; however, his backdrop remains the same. A simple window shade and a few wires of various lengths that swing up into the ceiling when not in use make up his studio. Quick, inexpensive and simple, and as he says: keep it simple and why waste money?



One of his favorite jigs is this one, which he bought at a woodworking show. The first time he set it up, he cut a perfect octagon right out of the box.



The jig's scales are clearly marked for the precise angle, and he has not had a problem with adjustment since it has been in service.

Assembling the spray booth is simple: slide it out of the ceiling mount, slip the parts together, plug it in, and spray dust is eliminated. Thanks to an activated charcoal filter, the unit also removes fumes.

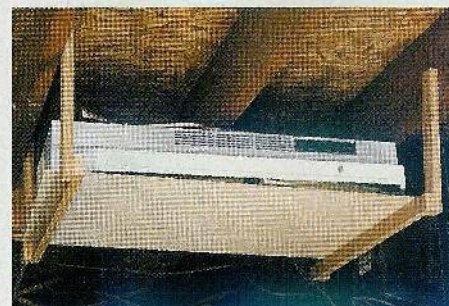
Rick also has a large two-stage air compressor with service connections all over the place, along with plenty of light. His layout benches and many of his tools are mounted on rollers, which not only makes for more convenience, but also maximizes open space.

His office contains just about every woodworking magazine published in the last 20 years, from volume #1 to present, and all are cataloged as to content. An up-to-date computer, scanner and a copy machine that collates, staples, pours Pepsi, and lights cigarettes adorn his office space. He has been buying old patterns and catalogs, which he has scanned into his computer, and has also created new patterns, which are available through him.

So there you have it: a guy with over 20 years experience in woodworking and scrolling, who loves to help others and has taken us on a tour of his shop! Happily, Rick has prepared a big bunch of articles that are sure to keep you on pins and needles waiting for your next issues. You can contact Rick by mail, phone or Internet at: Rick's, 109 N. Ewing, Box 237, Grimes, Iowa 50111; 1-515-986-4185; www.scrollsaws.com.



The apparatus shown above, stored in the ceiling, is his vacuum bag press. Because of its unwieldy size, it is inconvenient to have lying around, so he mounted it overhead. He built the ceiling mount so that he can gain easy access to the vacuum with a step stool or let it swing down. The pump is hooked up, the switch turned on, and presto—it is working.



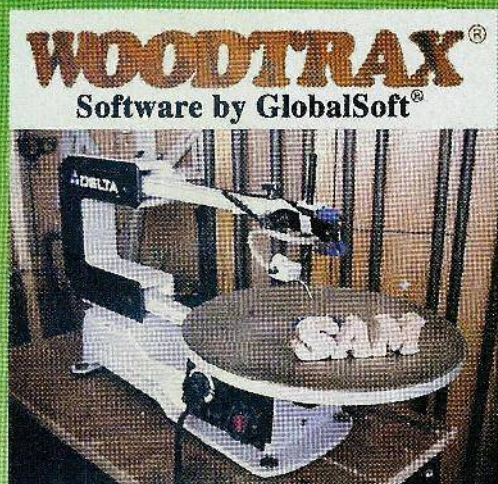
Another rig he has put together from scrap wood and an old kitchen vent is his knock-down spray booth. It too is stored overhead when not in use, as shown in the photo above.



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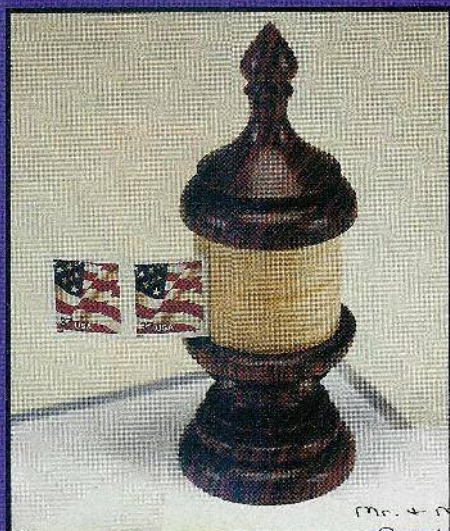
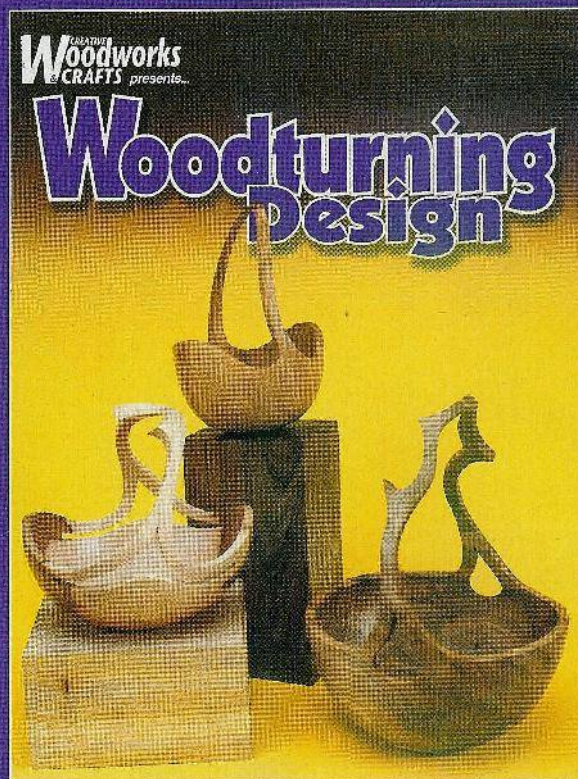
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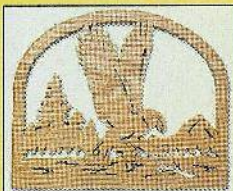
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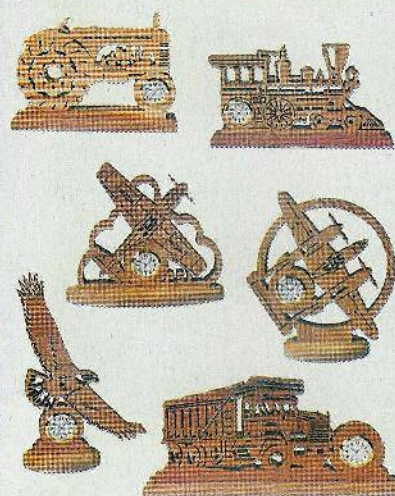
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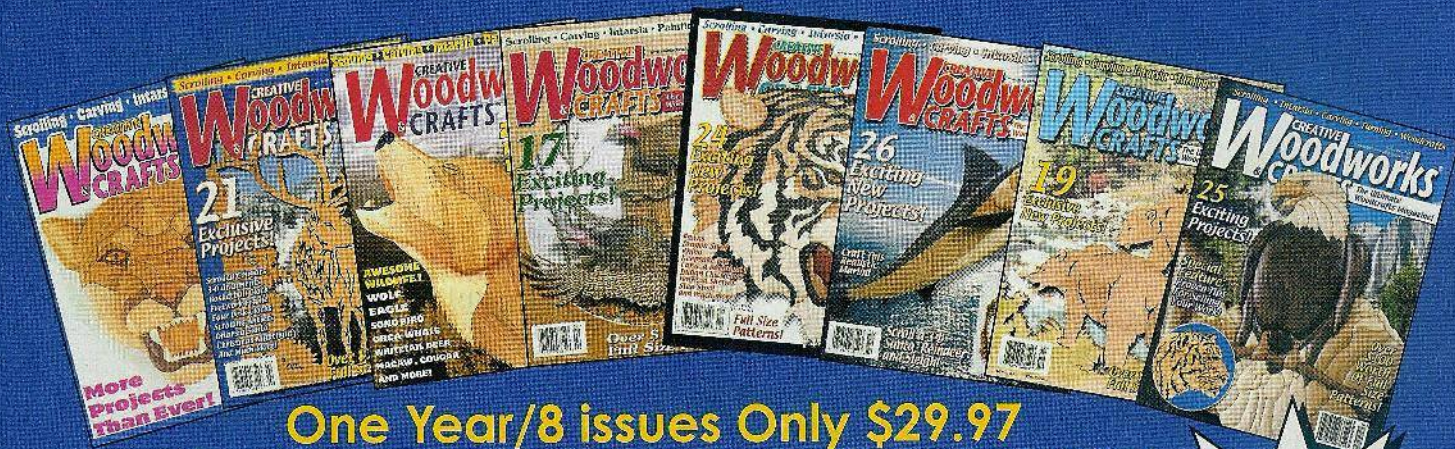
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Myths and Facts about Saw Blade Steel

by Ralph Costa

I have been involved in the manufacturing of saw blades and the designing of equipment to fabricate them for quite some time. I have read many articles about saw blades and how they are made. The articles are good and, for the most part, technically correct. However, I would like to clear up some of the terminology regarding steel and share my knowledge. Please keep in mind that this article is not intended to offend any author of any past articles. It is meant to present some basic facts about steel.

First let me clear up a myth about the color of steel. Saw blades are bright (silver), straw (golden), or dark blue. Often people want a specific color because they think, and often insist, that certain colors are stronger than others. This is not true. Color does not affect strength. It is not known exactly why blades need to be a certain color, but they are out there. I was once told that manufacturers colored the steel to differentiate their blades from other manufacturers. Maybe way back it made sense, but all that it really does is add an extra operation in manufacturing.

So, how is the steel colored? After blades are heat-treated (hardened), the steel is submersed into a tub of a hot molten metallic solution. It is then pulled along through the solution for a certain amount of time, then quickly lifted into the air. The length of time the steel is held in the tub and released to the atmosphere determines the color. This time period does not affect the hardness of the steel at all. In other words, coloring does not make the steel harder or softer. It is for appearance only.

While on the subject of heat-treating, some terms are used and are sometimes not quite accurate in the manner they

appear in an article. So, here are some common terms related to steel and some simple definitions, if that is possible.

Alloy Steel—carbon steel that has added amounts of other elements in order to make the steel usable for a specific purpose

Anneal—heating and cooling operation used to soften hardened steel

Carbide—a compound of carbon with a more positive element such as iron

Carbon Steel—steel that has only carbon added as the alloying element (known as ordinary steel)

Ductility—the degree to which steel can be cold-worked, in stress, without breaking

Fine-Grain Steel—steel in which the grain does not grow when held at high temperature during heat-treating

Grains—the crystals in metals

Hardness—the resistance to deformation by penetration, scratching, or bending

Heat Treatment—an operation involving the heating and cooling of metal for the purpose of creating a desired characteristic

High-Speed Tool Steel—hard steel used for making cutting tools

Malleability—the capacity of steel to be permanently deformed with little resistance and without rupture (aluminum, gold, and silver are malleable metals)

Metallurgy—the art and science of mining metals and creating metals for practical use

Quench—the rapid cooling of steel by dipping it, usually in a liquid, in order to make it hard

Rockwell Hardness Tester—a machine that determines the hardness of steel by creating a small dent in the steel and then measuring the depth of the penetrated mark

Temper—the reheating of steel below the critical point, followed by cooling in order to slightly decrease the hardness while keeping the strength

Tensile—also known as maximum strength, it is the stretching of steel and then measuring the point at which it breaks

continued on page 73



WES' WORKSHOP Shop Talk

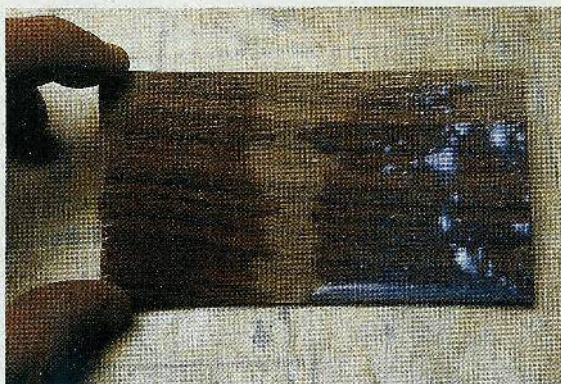
by Wes Demarest

Glues, finishes, and more

The federal regulations governing volatile organic compounds (VOCs) have had a tremendous impact on the glues and finishes we use in woodworking. There are those who extol their virtues, which include no odor, no toxic residue or fumes, and easy cleanup. Well, these are not without trade-offs. The glues have not been a problem, and hide glue has always been dissolved in water, so there is no unique problem there. Finishes, on the other hand, are a horse of a different color.

There is an odor to finishes, which, while not as noxious as lacquer or shellac, can give you a headache if you do not have enough ventilation, but that is explained on the label. They clean up with soap and water, so you do not have those odd cans of dirty paint thinner to dispose of. Another of their marketing points is that they are neutral in color, imparting little if any color shift to the finished product. However, not all brands are the same. Some can be brushed on and others must be sprayed, but all brands have similar problems with the finished coat. Whether it is orange peel, fish-eye, or sags, you still have to understand the conditions under which the finish must be applied. But there is a common problem that many, but not all, water-based products share, and that is freezing.

In this example, I am showing a wood hardener that we use on spalted wood prior to starting a project. The sample on the right stayed in the shop last winter and froze and thawed a number of times. The sample on the left is a fresh bottle. Freezing breaks down the solution, and although it still has some ability, its strength has been diminished and no amount of saturation will provide the durability we are looking for.



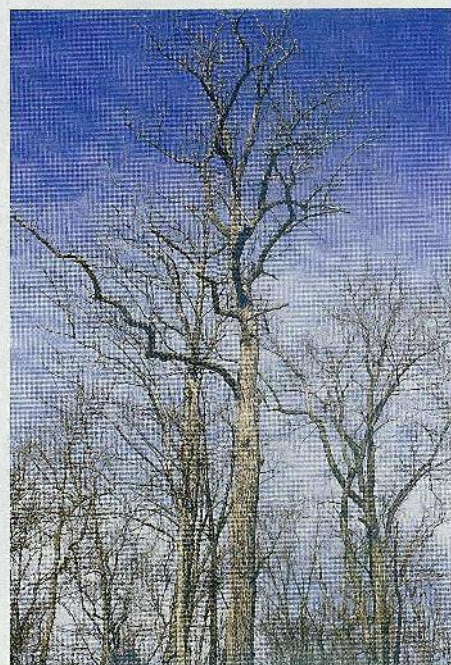
We have had the same thing happen with some of our finishes that stayed in the shop during the winter. Now that we are no longer doing craft shows, our volume of finishing has diminished considerably, and storage has become a problem. The main problem is that I usually forget to bring the stuff into the house, and eventually the fire goes out in the woodstove. One product that has held up well after being kept in below-freezing temperatures is the *Hydrocoat* Danish Oil we used on the *Rit® Dye* project in this issue. It is several years old and is still good, and the label does not have a freeze warning on it. Still, I can't really call this a product test because I just found it buried on one of my spare-stuff shelves.

I wish the same were true for the glues. Unfortunately, I threw out two bottles that had clotted up (which I should have saved for a photograph), but I'm sure you know what I'm talking about. I have tried to extend the life of glues in the past, but they really can't be saved. Once you notice a change in the odor or texture, get rid of it and buy fresh. After all, we expect the glue to hold permanently, and if it is bad out of the bottle, that is an unreasonable expectation.

On another note

Ray Seymore, owner of Seyco, a dealer of *Excalibur* scroll saws (along with other woodworking products), received a letter from Sommerville Design, the folks that make the *Excalibur* and *DeWalt* DW 788 scroll saw. The letter informed Ray that Sommerville Design will no longer be manufacturing the *DeWalt* saw, nor any of its associated parts or accessories. It seems that *DeWalt* is following the path of many manufacturers and is now having the saw made somewhere in the Orient.

Yellow Poplar



Yellow poplar, *Liriodendron tulipifera*, is also known as tulip poplar, tulip wood, poplar, whitewood, canoe wood and many other local names. Although the name includes the term "poplar," it is not in the poplar family, but is rather in the magnolia family. It is a fast growing tree that grows from Connecticut across to Michigan, south through the southern Appalachian Mountains to Florida, and west to the Mississippi River. It prefers deep rich soil that is damp, but not soaked. In some areas it grows in pure stands but mostly it is found scattered through hardwood forests and woodlands. The trees growing today grow well in excess of 100 feet tall with diameters over 6 feet. I know of several specimens growing along the Delaware River that are closer to 150 feet tall with diameters approaching 8 feet. Trees grown in the woods can have a clear trunk 60 to 100 feet from the ground. This, along with its size, make yellow poplar a commercially important tree.

The bark is deeply furrowed, dark brown with a white scaly surface in the furrows; however, young trees are smoother and green. The bark offers little protection to fire, unlike other trees with a heavy bark.



WES' WOOD PILE

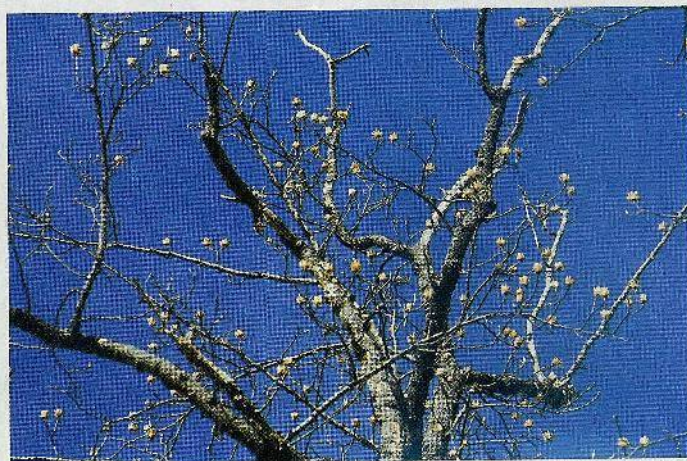
The inner bark was used by the Native Americans and pioneers to make stimulants and bitters, to expel worms and to reduce fever.



The leaves of this tree are very distinctive and are not often confused with other species.



The flowers, which look like tulips, are another distinctive feature. They are beautiful and attract bees from miles away; these bees in turn produce a honey that some love and others hate. Despite the numbers of bees working a tree, fertilization is quite poor, though the vast number of seeds produced by a tree make up for the difference.



The seed pods break apart in the winter, releasing the seeds into the air to be carried by the wind. The pods remain on the tree throughout the winter and are another field identification key.

If you are looking for boards that are long, wide, thick, clear, and a delight to work, this is the wood to get. It is classified as moderately heavy, moderately strong, moderately resistant to shock, and prone to rot in damp locations. The grain is normally straight, tight and uniform in texture. It machines well with hand or power tools, but has a tendency to burn, so be sure to use sharp blades or bits and adjust your feed rate appropriately. At this time it is inexpensive, making it a good wood for students.



Flatsawn view



End grain view

The only problem likely to be encountered is the color of the heartwood. It can range from purple to green with many shades in between, but will darken with exposure to light. Therefore, don't be disappointed when the grass in your intarsia project turns brown! Paint works great on this wood, and it can be stained or dyed to look very much like walnut and cherry. Sap wood color ranges from white to light beige, and it also darkens a bit.

We have never experienced any glue failure or finishing problem with this wood, and it holds screws and nails well. Even though end splits are not common when fastening, we always drill pilot holes for any fastener we use. A 12"-wide board will shrink between 1/4" and 3/8" from 20% to 12% moisture content, and a little under 1/4" between 6% and 12% in service.

Yellow poplar is commonly used as frame stock in furniture, interior moldings, siding, pallets, cabinets, musical instruments, crates, plywood and specialty products. Native Americans used the trees as dugout canoes, and filled them with rocks and sunk them in shallow water to keep them from drying out when not in use.



by Dirk Boelman

Patterns Located in Full Size Pattern Section No. 2

Frames for Good Memories

SUPPLIES

Tools: scroll saw with blades; drill with bits including mini drill bits; needle files; awl; clamps; hammer; carpenter's square; nail set
 Assorted small nails/brads
 Sixteen 8D nails for corners (approx. 2-3/8" long)
 Two sawtooth hangers and mounting nails/screws
 Temporary-bond spray adhesive
 Sandpaper, assorted grits
 Wood glue
 Medium artist's brush
 Acrylic paints: Cadmium Red Medium and Cerulean Blue Hue
 Clear semi gloss acrylic spray finish

Introduction

These silhouettes could represent a great Chief and two scouts high upon a hilltop, or perhaps a father and his children. They are scenes from the past, of the life and times of a great people. They evoke many thoughts and visions about a way of life that has been told about in stories passed down through many generations. With these frames, let us capture and hold good and kind memories of the Native American peoples, for whom I have great respect and admiration.

INSTRUCTIONS

Making the silhouettes

The silhouettes cut very easily from 1/8"-thick Baltic birch plywood. You will find that it is a little tricky working with one sheet of this thin material, so consider stacking two or three sheets of the plywood and sawing out duplicates simultaneously.

Start by making photocopies of the original patterns, thus saving the originals for future use. Precut your plywood to 10" x 12", making sure that all corners are square. Temporarily adhere the photocopy of the silhouette (B) to the wood with spray glue. Drill blade entry holes into the areas to be cut out. Use a mini drill bit to make the holes for eyes and other small areas to be cut out.

Make all of the cutout openings with a scroll saw. (Strive to saw exactly on the pattern line; however, do not be discouraged if the blade wanders

off the line now and then. Once the paper pattern has been removed, no one but you will ever know if you were exactly on the line or not.) After making all of the cutouts, remove the paper pattern. Touch up any imperfections with needle files, sandpaper, knife, etc.

Use the full-size patterns to make the border panel (A) from 1/8" plywood and the spacer panel (C) from 1/4" plywood. Cut the backer panel (D) to size from 1/4" plywood. (Note: there is no pattern for the backer.)

Making the frames

Miterless corners make these frames quick and easy to build. Start by measuring and cutting the subframe parts (E and F) to size. Make four 3/4" x

1-1/2" x 10" pieces for the tops and bottoms (E), and four 3/4" x 1-1/2" x 15" pieces for the sides (F). Make sure that all saw cuts are perfectly square; this will aid greatly during assembly. On the edges of the 15"-long pieces (F), locate and drill two 1/8"-diameter holes (at both ends of the pieces) as shown in Fig. 1.

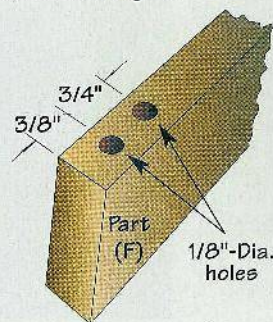


Fig. 1. Drill two 1/8"-diameter holes on both ends of the vertical sub-frame pieces (F). Center the holes on the edge of the piece at locations as shown.



Assemble the subframe pieces as shown in **Fig. 2**. Use a carpenter's square to adjust the corners. Apply glue to each joint as you work your way around. Drive two 8D nails into each corner, setting the nail heads flush with the wood surface. Clamp all together until dry.

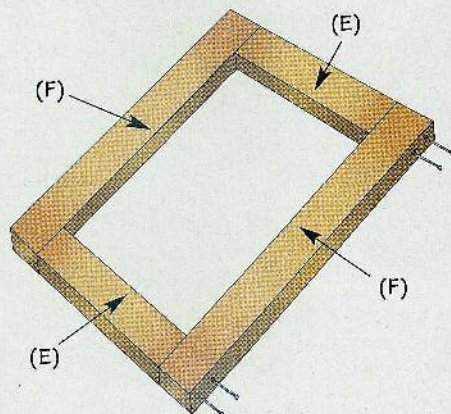


Fig. 2. Assemble the subframe with glue and two 8D nails in each corner (actual length 2-3/8"). Use a carpenter's square to guide assembly.

Next, measure and cut the face frame pieces (G and H) to size. **Note:** these sizes are slightly longer than needed, so excess can be trimmed as needed for a perfect fit. Make four 1/4" x 1-3/4" x 12" pieces for the sides (G), and four 1/4" x 1-3/4" x 13-1/2" pieces for the tops and bottoms (H).

Dry fit the top and bottom face frame pieces to the subframe. Mark and trim off excess length as needed to make the ends flush with the outside edges of the subframe. Next, dry fit the side face frame pieces by marking and trimming away excess length as needed to make them fit precisely between the top and bottom pieces (see **Fig. 3**). Glue all of the

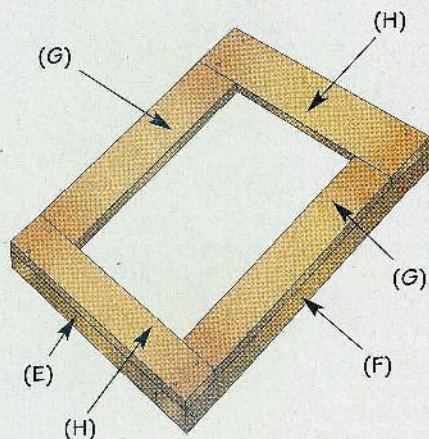


Fig. 3. Fasten the face frame parts (G and H) to the subframe. Make sure that all outer edges are flush.



face frame parts to the subframe. Small nails/brads can also be driven through the top and bottom pieces, as they will be covered with the cor-

ner blocks (I).

While the subframe and face frame assemblies are drying, make the remaining parts (I thru N). Most of

BILL OF MATERIALS

(for both silhouettes and two frames)

Part	Description	Size in inches	Quantity
<i>Baltic birch plywood</i>			
A	Border panel	1/8 x 10 x 12	2
B	Silhouette	1/8 x 10 x 12	2
C	Spacer	1/4 x 10 x 12	2
D	Backer	1/4 x 10 x 12	2
<i>pine</i>			
E	Subframe top & bottom	3/4 x 1-1/2 x 10	4
F	Subframe sides	3/4 x 1-1/2 x 15	4
G	Face frame sides	1/4 x 1-3/4 x 12	4
H	Face frame top & bottom	1/4 x 1-3/4 x 13-1/2	4
I	Corner blocks	1/4 x 1-3/4 x 1-3/4	8
<i>Baltic birch plywood</i>			
J	Thunderbird overlays	1/16 x 1-3/4 x 1-3/4	8
<i>pine</i>			
K	Frame overlays top & bottom	1/4 x 1 x 9-1/2	4
L	Frame overlays sides	1/4 x 1 x 11-1/2	4
M	Outer frame top & bottom	1/4 x 1-1/2 x 13-1/2	4
N	Outer frame sides	1/4 x 1-1/2 x 16	4

these parts will need to be painted prior to being attached to the frame as explained in the painting instructions that follow.

Make eight corner blocks (I) by measuring and cutting them to size: $1/4" \times 1-3/4" \times 1-3/4"$.

Use the pattern to make eight thunderbird overlays (J) from $1/16"$ plywood.

Use the patterns to make four of the top and bottom frame overlays (K), and four of the side overlays (L). Make all of these from $1/4"$ material.

Measure and cut the outer frame parts (M and N) to size. Make four $1/4" \times 1-1/2" \times 13-1/2"$ pieces and four $1/4" \times 1-1/2" \times 16"$ pieces. (These dimensions allow extra length to trim and fit during assembly.)

Painting

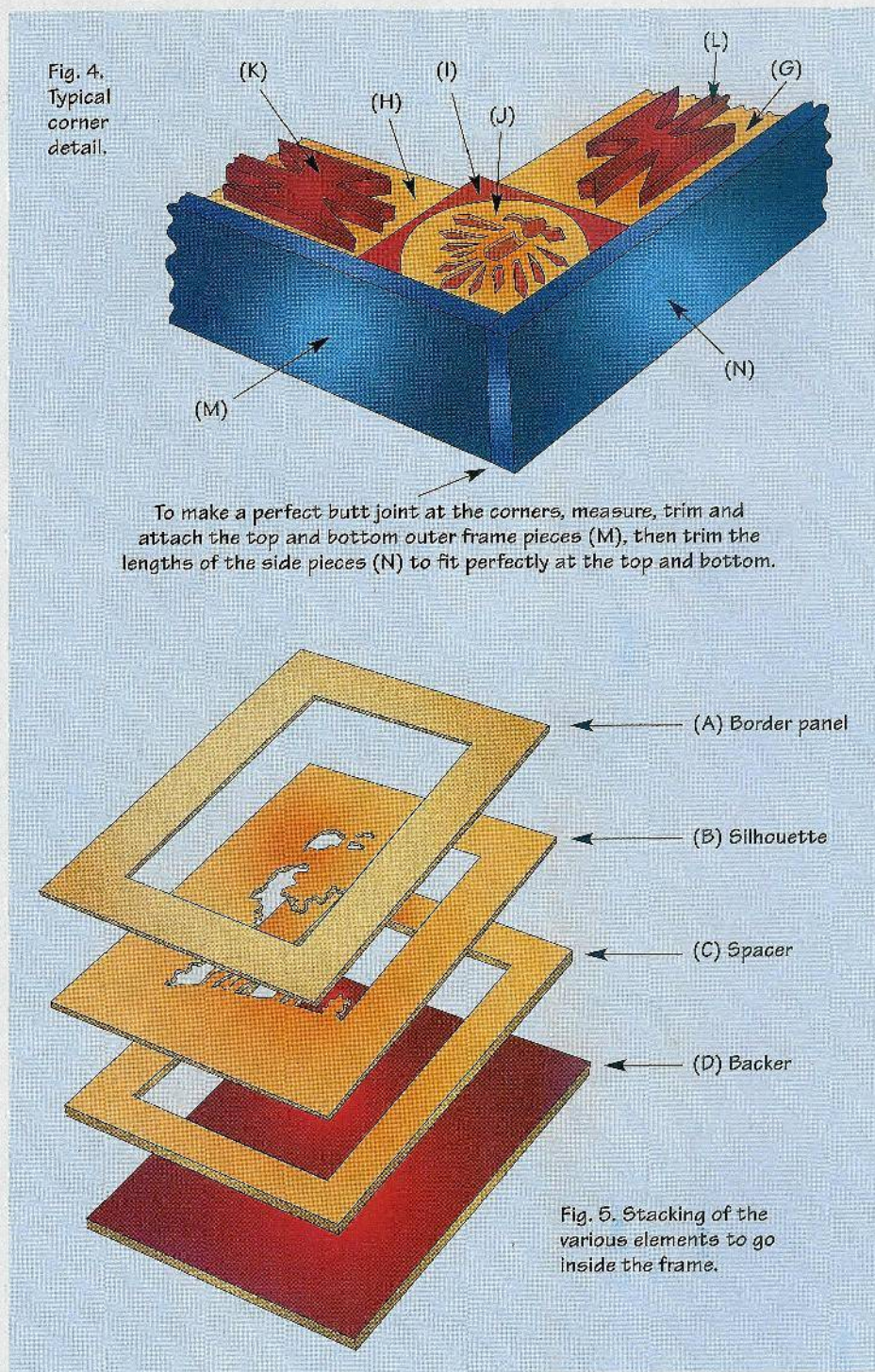
Even if you've never painted before, you'll have no trouble making your projects look just like these! We only use two colors of paint, red and blue, which are applied to the pieces before they are attached to the frame. So, you don't have to worry about getting paint on the wrong areas, you don't have to mix any paints together, and you don't even have to try to cover everything with a solid, even coat!

We used *Prima Acrylic Paints* from the *Marlin/F Weber Co.* They are easy to use and easy to clean up with soap and water. Use *Cadmium Red Medium* for the corner blocks (I), frame overlays (K and L), and backer board (D). Use *Cerulean Blue Hue* for the border panel (A), and outer frame pieces (M and N).

To apply the paints you'll need a medium-size artist's brush, a small bowl of water, and some paper towels or rags for cleanup. Start by squeezing out a small amount of paint (about the size of a grape or so) onto a scrap piece of cardboard. Dip your brush into water and use it to carry small amounts of the water to mix in and dilute/thin the paint. Practice applying a little paint on scrap wood. You don't want the paint to be a solid color when you brush it on the wood. It should be a thinner wash of color, which can be uneven and look somewhat aged or distressed. Keep adding water as needed. When you're happy with the look on scrap wood, go ahead and apply the paint to the real project.

After painting all of the pieces, allow them to dry completely.

Dry fit the outer frame pieces (M and N) to the subframe/face assembly). Trim lengths as needed to make



even joints at the corners, and attach with glue and small nails/brads (see **Fig. 4**). Touch up the trimmed ends with paint. Also attach the corner blocks (I), thunderbird overlays (J), and frame overlays (K and L) to the frame with glue.

Before installing the silhouettes and other parts within the frame, give everything a few coats of a clear semi gloss acrylic spray or other finish of your choice.

When everything is dry, assemble the parts within the frame in the order shown in **Fig. 5**. Install clips, tabs, or small brads on the backside to hold the parts inside the frame, and attach a sawtooth hanger so that you can hang your finished projects up on the wall to enjoy!

For questions concerning this project, send an SASE to: Dirk Boelman, PO Box 701, Platteville WI 53818. Email: dirkdraws@CenturyTel.net

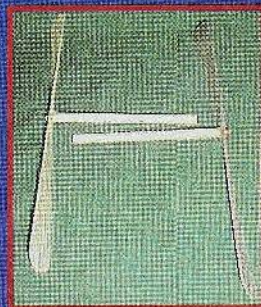
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Before



After

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Flatten Thin Stock:



Before - Cupped Lid



After - Flat As A Board!

How it's used to flatten stock:



Figure 1 - 1/4" x 7" x 12"
Bowed Walnut



Figure 2 - Bow is 1/4" high at
center of wood



Figure 3 - Clamped Flat



Figure 4 - Wood Flattened

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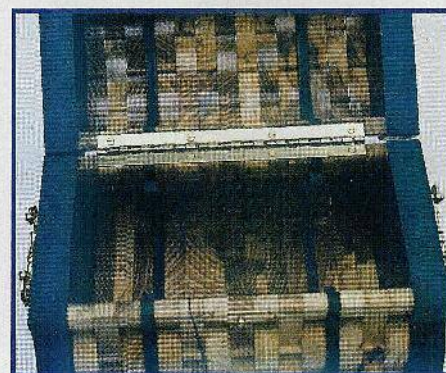
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Basketweave Jewelry Box

designed by John Nelson, developed and sawn by Wes Demarest



Introduction

John Nelson has created a jewelry box pattern in his own style that you will surely want to make. It took us a

while to come up with a wood combination that could be accented with a dyed color that wasn't too subtle or

didn't have too much contrast. We came up with spalted hickory sectors

SUPPLIES

Tools: scroll saw with assorted blades; drill with assorted drill bits; Dremel Moto tool

Four wood dowels, 3/16"-Dia. x 8-1/2" long

Rit® liquid or powdered dye, aquamarine or color of choice*

Sandpaper, assorted grits

Spray adhesive

Cyanoacrylate glue

6" piano hinge w/stops, Klockit #39461**

Brass pulls—two each, Klockit #38206**

Latch set, Klockit #39497**

PC-Petrified Wood Hardener***

Water-based Danish oil

Finish of choice

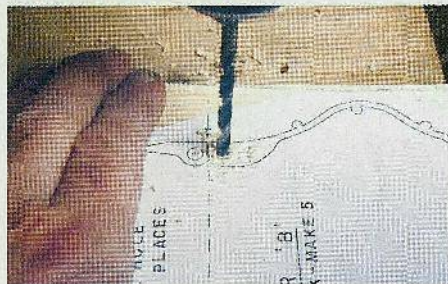
*For more information on Rit® dyes contact Rit® Consumer Affairs, P.O. Box 21070, Indianapolis, IN 46221-1070; (317) 231-8044, 9:00 to 4:00 Eastern time.

**Available at Klockit, P.O. Box 636, Lake Geneva, WI 53147-0636; 1-800-556-2548; www.klockit.com.

***Available in paint department of local hardware store or through Protective Coatings Co., Allentown, PA 18102; www.pcepoxy.com.

and yellow poplar spacers and ends. The four yellow poplar parts were dyed with aquamarine. Spalted hickory is nearly impossible to find commercially. We got ours from a scrap pile of cutoffs that had been lying around for quite a while. Also be advised that working with spalted wood can be harmful to your health. My lungs are congested for several days after machining it and I ALWAYS wear a mask while sawing, sanding, or planning it. Plus I keep my fans on and doors open so that as much dust as possible is evacuated from the shop. And I still feel it!

INSTRUCTIONS

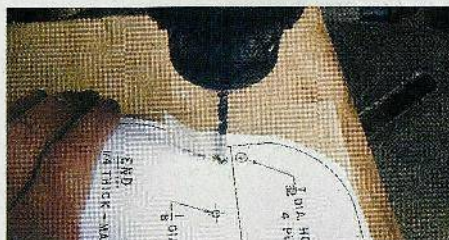


Step 1. Once you have selected your wood, cut your wood blanks to size, glue the patterns to the wood and drill your blade entry holes with a 7/32" (0.2187" or 5.5550mm) drill bit. The

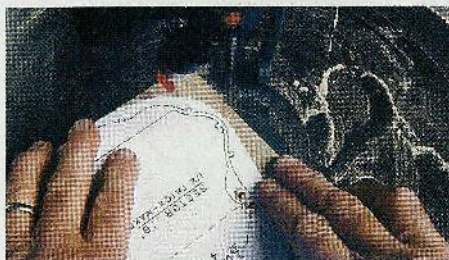
BILL OF MATERIALS

Part	Description	Size in inches	Quantity
	spalted hickory or wood of choice		
A	Sectors	1/2 x 5-1/2 x 6-1/4	8
B	Sectors	1/2 x 5-5/8 x 6-1/4	5
	yellow poplar		
C	Spacers	1/4 x 5-5/8 x 6-1/4	2
D	Ends	3/4 x 5-5/8 x 6-3/8	2
	spalted hickory or wood of choice		
E	Storage tray ends	1/4 x 1-7/8 x 2-5/8	2
F	Storage tray sides	3/16 x 1-1/4 x cut length to fit	2
G	Storage tray bottom	1/4 x 2-5/8 x cut length to fit	1

ends can be any thickness you wish; however, we used a 3/4" thickness to add a bit of mass to the ends.



Step 2. Drill the dowel holes into the end pieces. In this case, we set them in "blind"; that is to say, they do not show on the outside of the ends, although allowing them to show would add an interesting accent. We use tape as a depth indicator.



Step 3. If you happen to use hickory, don't try to stack cut it. Hickory is very hard and will dull your scroll saw blades in no time at all. It is also difficult to plane without tear out, and a drum sander will cause burns. Cut the interior first and then the outside because the outside waste portion will offer a lot of protection from breakage while cutting.

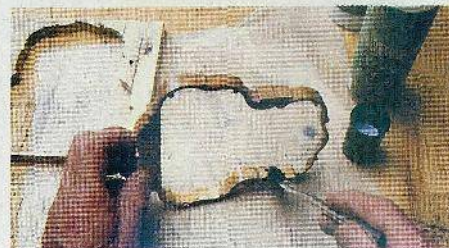


Step 4. Remove the patterns from the

blocks. We flood the surface with paint thinner and wipe with a rag so that we get all of the glue residue out of the wood. Once that is done, we dry it with a heat gun or hair dryer, checking for any tackiness that may bubble up on the surface.



Step 5. Leave the sectors in the blanks and sand them after the paint thinner has dried. Sand all parts through 220-grit.



Step 6. If you use spalted wood of any species, apply a wood hardener. We found this at our local True Value hardware store, but I have seen it in some of the home supply centers as well. The hardener will make working with the spalted wood, which is after all rotten wood, a little easier. Allow the hardener to dry overnight.

Step 7. Prepare the accent wood (spacers and ends) to be dyed by wetting it (to raise the grain). After it has dried, sand it smooth with 120-grit sandpaper, and do it over again. Protecting your work area and yourself, heat the water to 170° and add your dye. For this project, we used aquamarine liquid Rit Dye®. Test the color on pieces of waste wood of the

same species that the dye will be applied to.



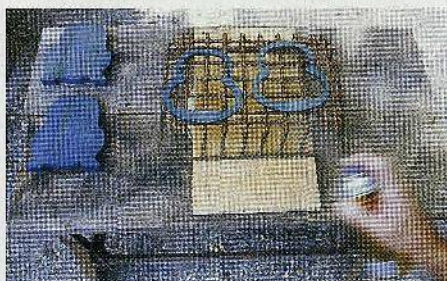
Once you have obtained the color you can dip, wipe or brush on the dye. Allow the color to penetrate, then rinse it in clear water and let it dry. If the color is not dark enough, apply more; if it is too dark, rinse it again. Once the wood has dried, you may find that the grain has risen a bit. To counter this, you can either sand it lightly or rub it with a brown paper bag to burnish the surface. Be careful that you do not sand through the color. If you do, apply some more dye with a brush and shade it in.



Step 8. We used a water-based Danish oil product for this project because we did not want to darken the light wood too much. If we had wanted to preserve the color, we would have used either clear lacquer or a clear acrylic finish without the oil. The water-based oil product cures quicker than the oil-based product and with the deadline fast approaching for this article, I had to save time.



Step 9. Wipe off the excess oil; it will not dry evenly if you don't, as the hardener will hold back its penetration somewhat.



Step 10. In order to preserve the color, apply a seal coat of your final finish to the dyed pieces and allow to dry, before handling them for the duration of the work.

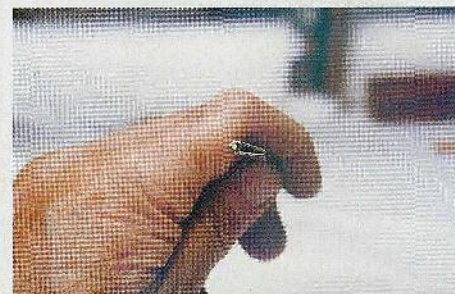


Step 11. Be sure to have your hardware on hand before you drill any required holes. The catalog from which these handles were ordered listed them as having a 1-1/4" hole spacing - WRONG! It is 1-7/16". It is little surprises like this that make last minute work interesting. Another surprise was that the mounting screws were threaded shafts that you cut to length before counter boring the holes. We opted to use metric machine screws; the store only had 20mm (3/4") in stock, so we had to counter bore them anyway. The size is M3x20mm. Drill the holes with a 1/8" (0.125" or 3.175mm) drill bit, and then counter bore with a 1/4" (0.250" or 6.350mm) drill bit.

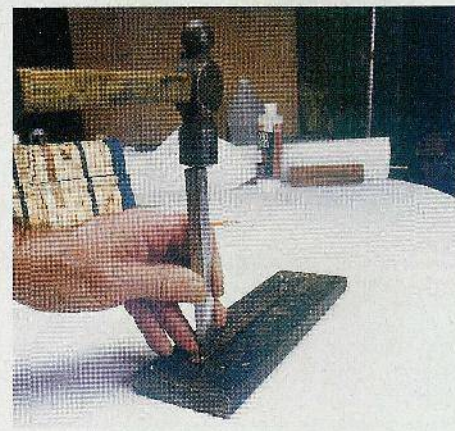


Step 12. Cut the sectors apart, but be sure to keep them together so that the wood grain is consistent. Before you start gluing the project together, be sure that the dowel fits all the holes without binding, but slides with a little pressure. To insure a proper fit, we assembled the whole thing without

glue first and measured the dowels for the blind holes. If you let the dowels extend through the ends, you have a larger "fudge" factor. Make sure of the basket weave pattern and grain orientation, and glue the assembly together. We used Cyanoacrylate glue because of its ability to bond to finished pieces.



Step 13. John also recommended using a piano hinge with built-in stop. This type of hinge will require more work than a flat hinge screwed or tacked to the back of the box. The choice is yours. If you use the piano hinge (as we did) or any butt hinge for that matter, you have another issue as shown here: they usually have a large gap. The gap will require a deep inlet (also called a gain). To reduce the depth required for this inlet, we recommend applying pressure to the hinge to flatten it.



Step 14. If you do not have a machinist's vice, use any flat-edged piece of steel to flatten the hinge. We have a

continued on page 56

Wood Works With Rit!

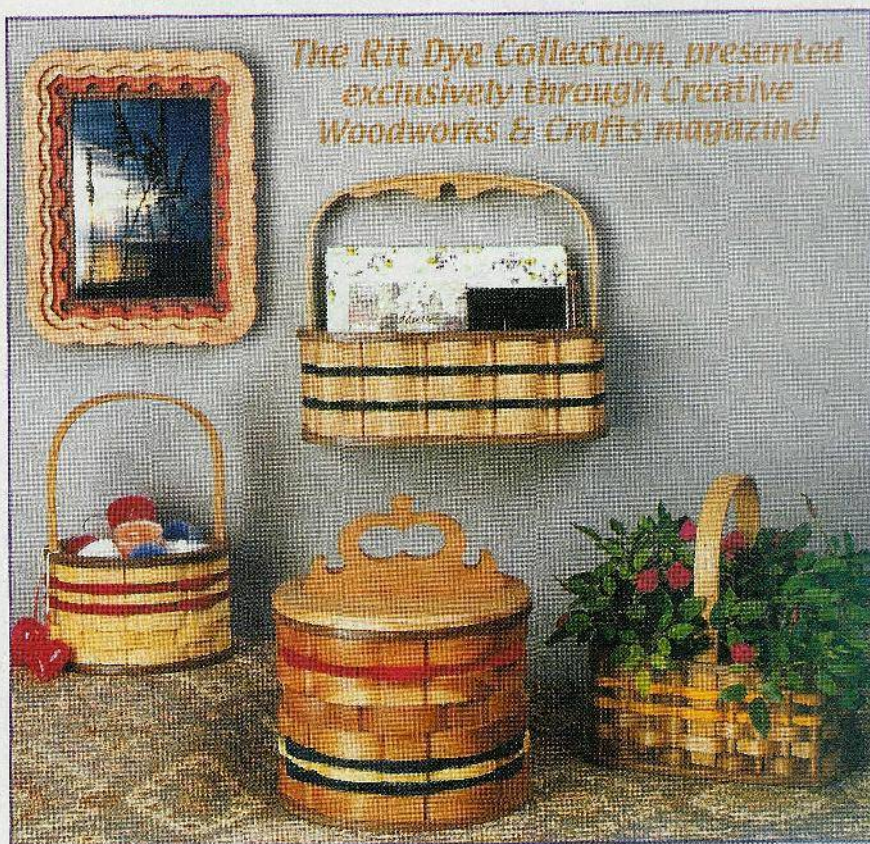


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The five scroll saw projects shown to the right were designed by John Nelson exclusively for *Creative Woodworks & Crafts*. All five were made with Rit Dyes and were featured in recent issues of *Creative Woodworks & Crafts*.



The Rit Dye Collection, presented exclusively through Creative Woodworks & Crafts magazine!

These five projects have appeared in recent issues of Creative Woodworks & Crafts!

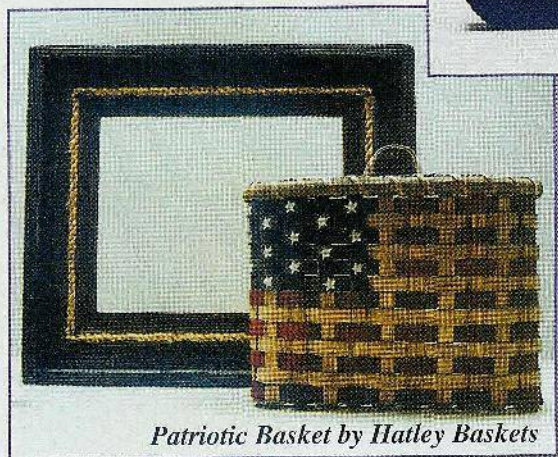
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Patriotic Basket by Hatley Baskets



continued from page 54
flat-ground cold chisel for this purpose.

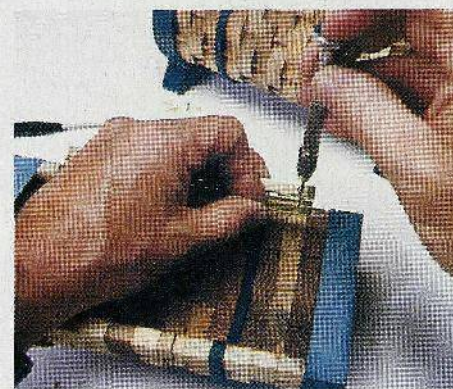


Step 15. The objective is to flatten the hinge as shown here and lessen the amount of inletting required to get the lid to close properly.



Step 16. We used our Dremel Moto

Tool with a 5/16" high-speed steel cutter to cut the inlet, and a 1/4" flat chisel to clean out the edges and corners. Take light cuts, especially if you are cutting a spalted portion.



Step 17. Drill the pilot holes to the proper depth with a 1/16" (0.0625" or 1.5875mm) drill bit for the screws supplied with the hinge. Be sure to use the correct size screwdriver for the screws, and use wax or soap as a lubricant when you screw them in. The last thing you want is a broken screw, or a stripped-out slot.

Apply several coats of finish before mounting the hardware.

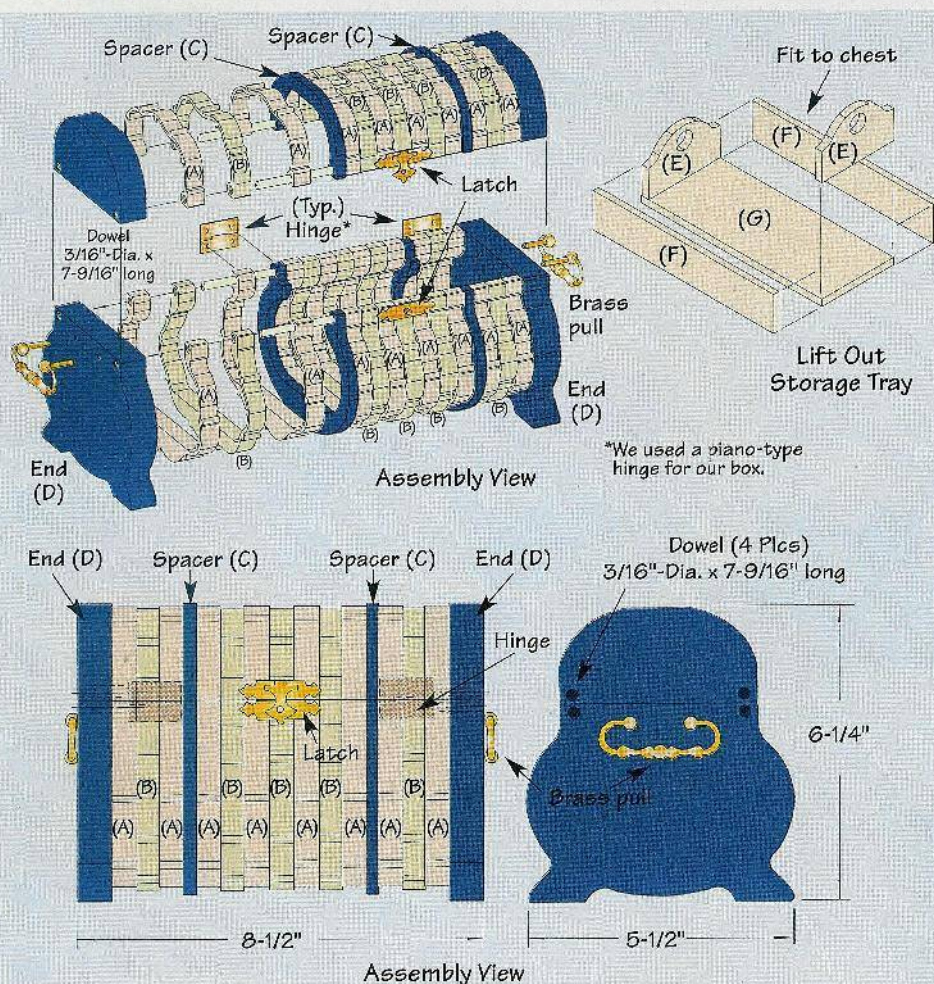


Step 18. Do not make the storage tray until the box is glued. What will happen is that the center of the sides of the box will bow in a bit and you will have to adjust the measurements accordingly. Once you have determined the proper size, cut, shape, and sand the components for the tray and glue them together. The two spacers (C) are designed to provide a shelf to hold the tray.



Step 19. We chose to plug the handle screw holes on the inside face of the ends (D), and made the plugs with a 1/4" plug cutter and a scrap piece of yellow poplar. The plug cutter made the plugs a little oversize, so we hand-sanded them to a friction fit. We applied the dye to the plugs with a brush and kept adding the color over several hours until the shade matched as closely as possible, wiping it with a damp rag rather than rinsing. After it had dried, we wiped on some finish with a finger and blended it in to hide the patch.

The latch is supplied with short brass escutcheon pins and will require you to drill pilot holes. DO NOT attempt to drive them in place without the pilot holes because you will either bend them over, split the wood or both. We matched the drill bit to the pin by eye. Don't ask me what size it was; it was one that was in the dish on the bench. But we did test fit it in a piece of scrap wood first to make sure that there was some resistance and that it did not fall out.



For questions concerning this project, send an SASE to: Wes Demarest, 66 Snover Road, Sussex, NJ 07461. Email: wes@woodworksandcrafts.com

An Important Message for Those with Hardwood Floors

Is it Possible to do a \$3,200 "Refinishing" Job on Your Hardwood Floors for Only \$20?

When you first glimpse a solid hardwood floor, you sense the richness, warmth and natural beauty.

Hardwood floors can be beautiful, but any homeowner knows that they get scratched and dulled from furniture and everyday foot traffic. Dirt, grit and furniture legs are your hardwood floor's worst enemies—they act like sandpaper on the finish, causing scratches, dents and dulling.

Refinishing sealed hardwood floors can cost the average homeowner over \$3,200! That refinishing process creates so much dust that many homeowners need to put their furniture in storage and move into a hotel for up to a week in order to complete the refinishing process. Worse yet, chemicals used in refinishing a hardwood floor can give off dangerous fumes and are often flammable. Instead, most homeowners neglect their fine hardwood floors and let them become more and more scratched. The once elegant finish just gets duller and duller.

What can you do instead? Joe McDonnell and 2 other chemists from the University of Miami invented a revolutionary acrylic polymer that will renew sealed hardwood floors at a price of less than \$20 for 325 square feet. It's called "Rejuvenate" and it gives a new life

to sealed hardwood floors. It improves the appearance of sealed hardwood without

costly sanding and refinishing. Just pour it on and mop it in. It will dry in under an hour and the acrylic finish will fill in scratches and greatly improve the shine of your floor. We did a gloss rating test on a badly scratched wood floor and we were able to

improve the optical brightness from a very dull "20" all the way to a highly reflective "96". The special formulation of acrylic polymers and 42 other ingredients coats the top of the floor and fills in scratches. The unique acrylic formula protects the hardwood from stains and discoloration. The leveling agents in Rejuvenate create a much more even and uniform finish. But unlike a wax, there is no build-up, no yellowing and your floors get less slippery.

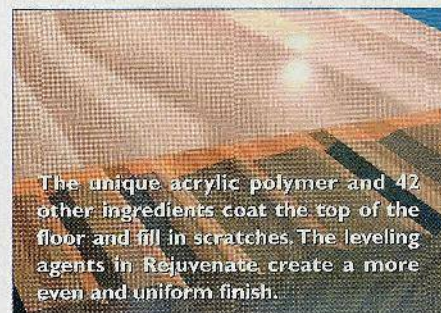
Not Just for Wood. Our chemists own more than a dozen patents and have developed surface refinishing techniques for the military. They made an amazing discovery when testing Rejuvenate. Not only would the formula work on sealed wood, but it was also remarkable on tile, stone, and linoleum. The exclusive polymer formula improved the shine and protected the flooring on all of these surfaces. The

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formula created a rock hard barrier between the foot traffic and the flooring surfaces. If you look at floors with a microscope, its hard to believe how the day-to-day wear and tear on a floor creates crevices in tile, stone, linoleum and wood. It makes sense to protect your floors with Rejuvenate. So avoid the costs and inconvenience of floor refinishing. Don't move out—just Rejuvenate!

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Ceramic



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Reader's Gallery

Attention readers

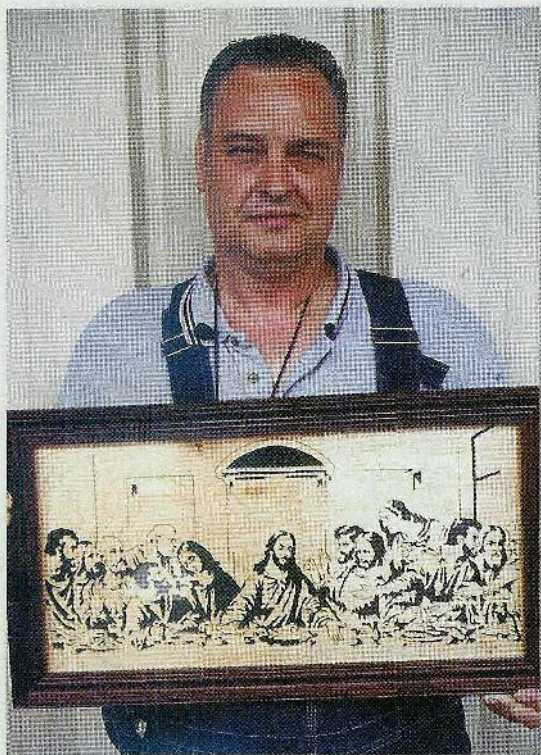
We want to expand upon our Reader's Gallery feature, so we invite you to send us photos of your work, whether original or not. If it is not of your own design, please tell us whose design it is, and, if possible, add a few sentences about the piece(s) being shown. Good, clear, flat photos (or slides) are desirable—please do NOT send the item itself. Send to Creative Woodworks & Crafts, 243 Newton-Sparta Rd., Newton, NJ 07860, Attn: R. Becker.



Dr. Tom Swearingen, from Burlington, Iowa, is both an "intarsia junky" and a Civil War reenactor. He designed these patterns based upon photos he found in a magazine. The diameter of each is 15", and *Minwax* waterbased stains were used for the coloring. Very creative, Tom!



Frank King, from Peterborough, Ontario, made this excellent two-drawer box.



Danny Ramsey of London, Kentucky, brought his original version of The Last Supper to Sloan's 2003 Tennessee Picnic. Good job, Danny!



Fred Beuler of Lake Havasu, Arizona, designed and crafted this impressive Western Intarsia scene. Fred, we can already hear the pattern companies beating a path to your door!

Laverne Wilkie, from Bjorkdale, Saskatchewan, crafted this excellent Wings of Gold Intarsia, designed by Garnet Hall. Cut from spruce, it was colored with metallic blue, silver, and gold acrylic paints, and then varnished. The intarsia was mounted in a box frame on red cotton material and a glass front was added to protect it from dust and moisture.



Marvin Scrivner, from Moore, Oklahoma, made this neat underwater scene from a Scroller, Ltd. pattern. His sister-in-law, Cheryl Ivey, painted it.



Josh Helgersen, from Kansasville, Wisconsin, won a Junior Scroller award at the 2003 Pennsylvania Picnic with this Eagle Clock, which was designed by Vernon Brown of the Wooden Teddy Bear and which appeared on the cover of our Apr. '03 issue.



Gene Steward, from Kent, Washington, looks justifiably proud standing next to his Imperial Tower clock, designed by John Nelson. It took him 160 hours over a period of nine months to make the clock from butternut wood. He's been a loyal reader since 1994.



Bill Ellexson, from Longview, Washington, made this beautiful Wild Turkey Plaque from the cover project of our Mar. '01 issue. It was crafted for his nephew, an avid turkey hunter. Impressive, Bill!

continued on page 60



John Engel, from Gaylord, Michigan, was so inspired by John Polhemus' Chain Saw project (from our Sept. '03 issue) that he made these great Key Chains. Good job, John!



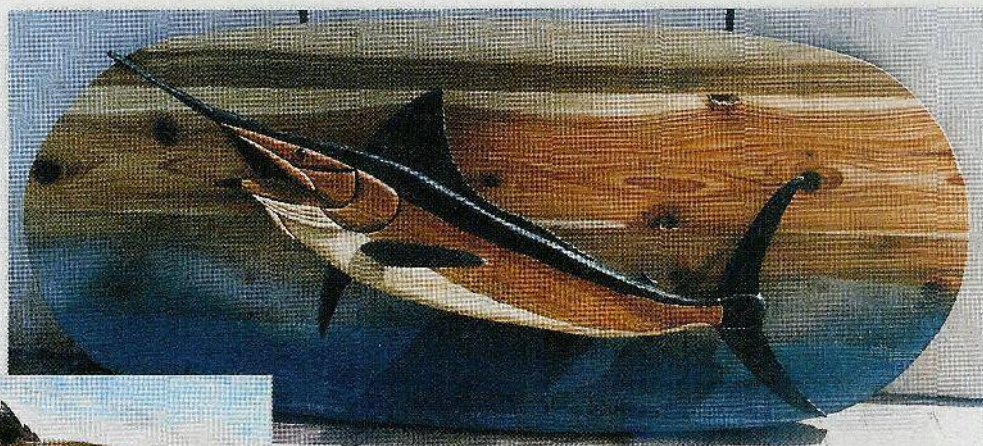
Ron Foland, from Lyman, Nebraska, made this impressive Charley Sloan clock, which was designed by Wilckens Woodworking.



Howard Lampa, from Bridgeport, West Virginia, took the Peanut Elephant Puzzle from our Aug. '03 issue and modified it by placing the puzzle pieces inside a larger elephant (instead of a peanut). He acquired the larger elephant pattern from a Patrick Spielman book. Howard has been scrolling for about twenty years and remains very enthusiastic about it.



Colleen Fornwalt, from Altoona, Pennsylvania, crafted this lovely Intarsia Hummingbird, taken from a Garnet Hall design that appeared in our Millennium issue.



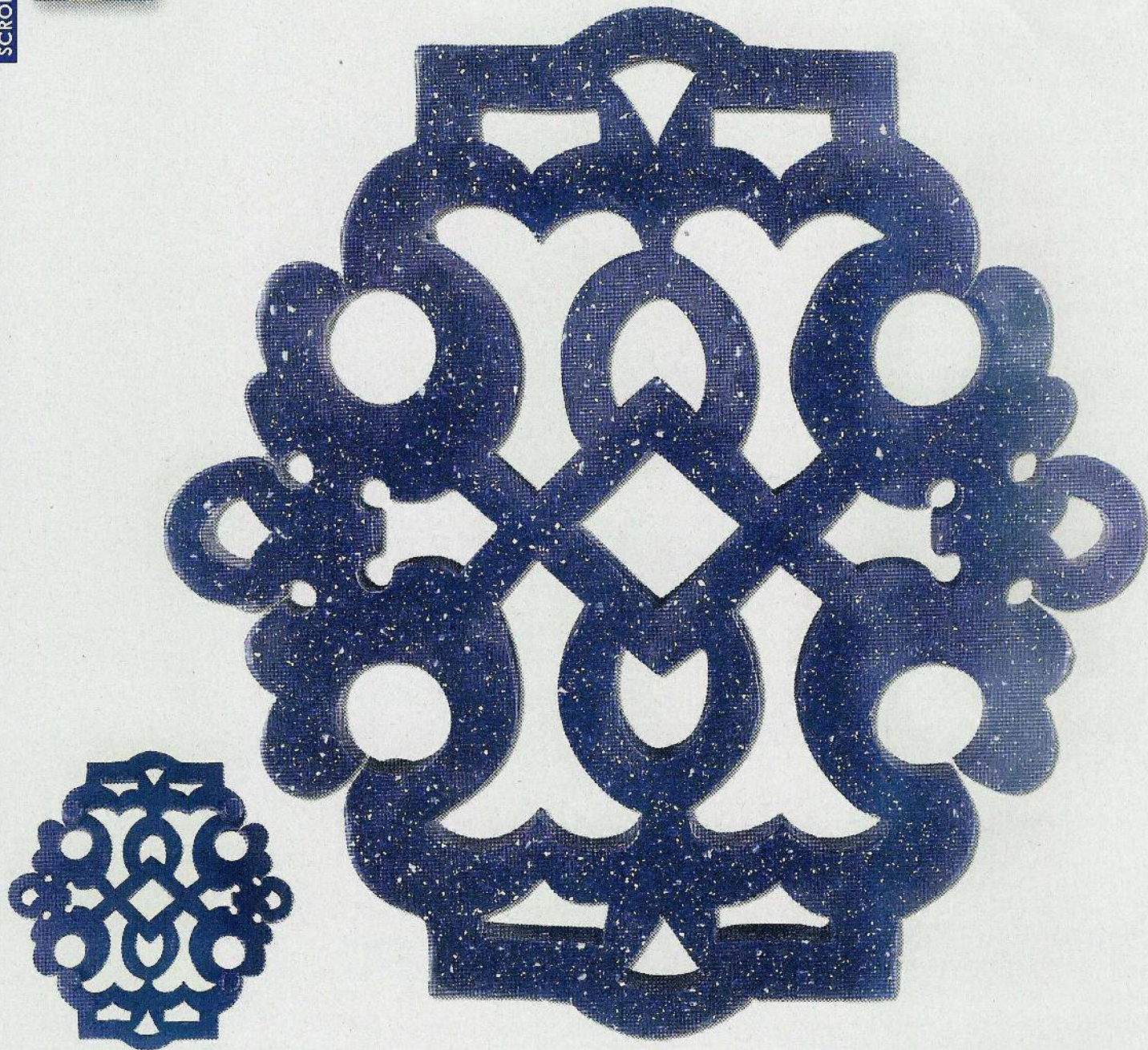
Tony Smart hails from the coast of South Africa, about 65 miles south of Durban, and is a retired mining engineer. The Blue Marlin, from our Jan. '03 issue, was made as a gift for his son-in-law's birthday. His son-in-law showed it to some of his fishing buddies and, as a result, he had orders for six more right away! The Striped Bass, from our Sept. '01 issue, was made entirely from silky oak (readily available down there). Both the Marlin and Bass were designed by Bob Hlavacek, Sr.



Corian® Trivet

by Joan West

Patterns Located in Full Size
Pattern Section No. 1



INSTRUCTIONS

Apply pattern using spray adhesive. Wrap entire project in 3 to 4 layers of clear packaging tape.

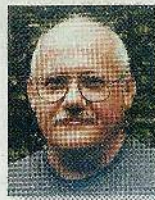
Drill out designated areas. Drill entry holes. Cut out trivet with saw set at a speed of about 1300 strokes per minute. Cut out trivet feet.

Scrape residue on edges with craft knife. Sand edges as necessary. Round over bottom edges of trivet feet and polish. Position feet on bottom side of trivet and glue in place.

For questions concerning this project, send an SASE to: Joan West, 3810 Tarpy Dr. SW, Cedar Rapids, IA 52404.

SUPPLIES

Corian®—one piece 1/2" x 9" x 9"
Tools: scroll saw with No. 7 blade; drill
press with assorted small bits
Temporary-bond spray adhesive
Clear packaging tape
Craft knife
Superglue
Sandpaper, assorted grits



Mammoth

by Robert J. Hlavacek, Sr. of Wildlife Intarsia Designs

Patterns Located in Full Size
Pattern Section No. 2

Introduction

This project combines intarsia with scrolling. You can make it as shown or use just the intarsia or scroll sawn portions if you prefer. Here's what you'll need and how it's done:

Preparation for the intarsia mammoth

Redraw the mammoth pattern on tracing paper; this will let you see and utilize the wood grain when laying out the pattern. Use white transfer paper on the dark wood and red on the light-colored wood (see Fig. 1).

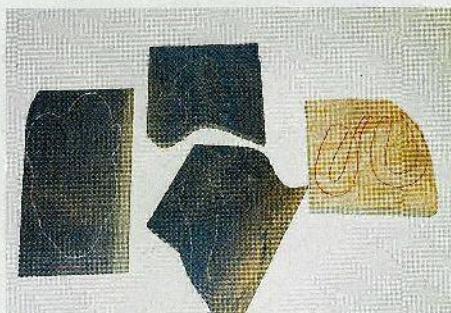


Fig. 1. Tracing paper was used for pattern layout.

Cut the head and trunk apart as shown in Fig. 2. Tape the pieces of the trunk together; cellophane tape was used here for clarity. Position the forehead on the trunk and trace a new cut line (see Fig. 3). Cut the pieces slightly outside the line, then drum sand to make them fit snugly (see Fig. 4). A Mini-Sanding Arbor works well on this mini-mammoth.



Fig. 2. The head and trunk have been cut apart.

Contouring

Since this project is so small, much of the contouring is subtle. Refer to the Typical Contours illustration (in the pattern section) and the photo of the completed project to

help with the contouring. Use sanding drums in a drill press to contour the pieces (see Fig. 5). If you have a

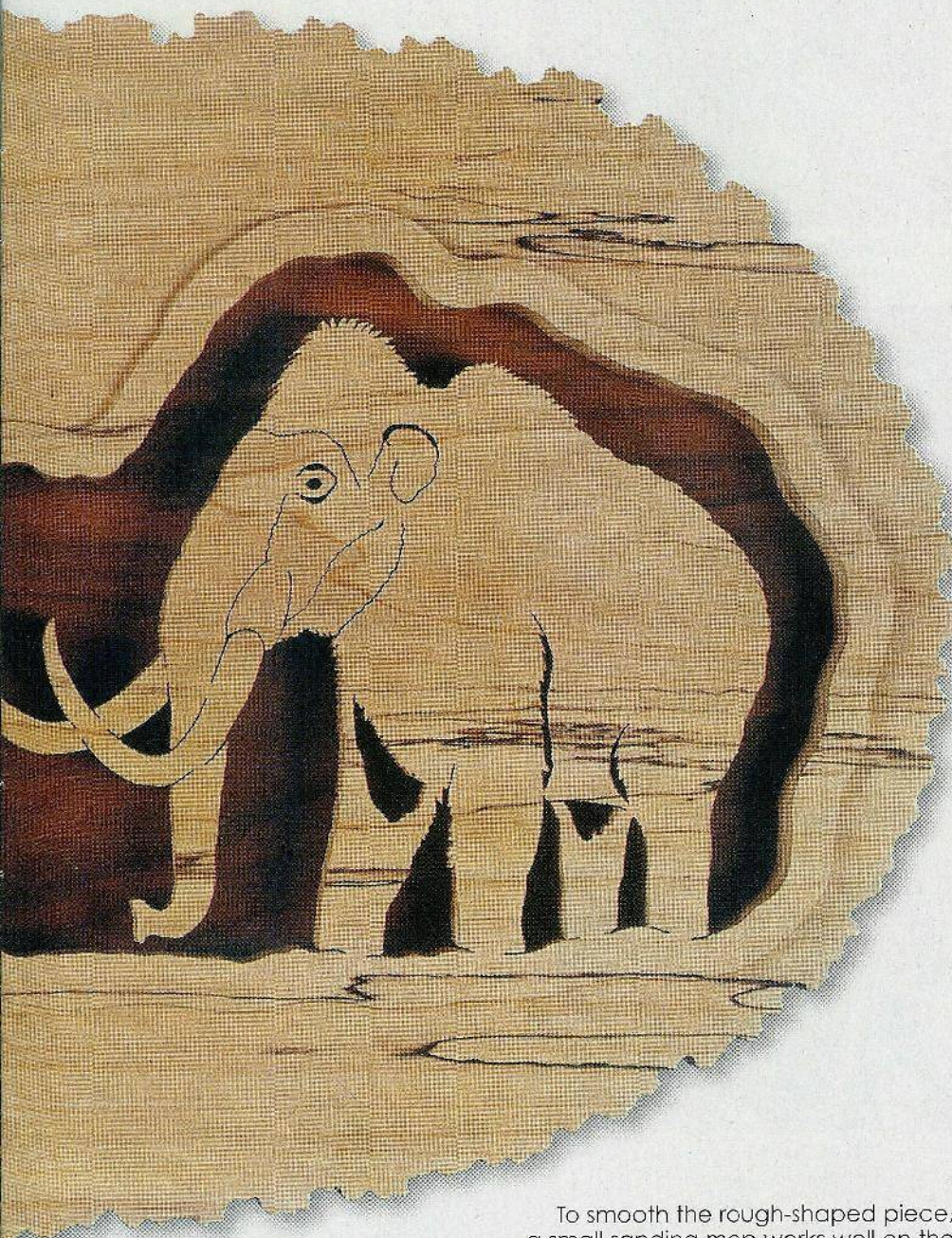


Fig. 3. Positioning the forehead on the trunk's upper edge for tracing a new cut line.



Fig. 4. Drum sanding for a snug fit.





rotary hand grinder, you may find using it on these small pieces to be more convenient.



Fig. 5. Contouring the parts with a sanding drum in a drill press.

To smooth the rough-shaped piece, a small sanding mop works well on the larger pieces (see Fig. 6). The smaller pieces can be sanded by hand.



Fig. 6. A sanding mop is recommended for smoothing out the larger pieces.

SUPPLIES

Wood: *spalted soft maple*—one piece 1/2" x 11" x 17" (for the silhouette); *plywood*—one piece 1/8" x 10" x 7" (for the backer behind the silhouette); *walnut*—one piece 1/4" x 4" x 7" (for the mammoth body), one piece 3/8" x 4" x 7" (for the head and trunk); *curly hard maple*—one piece 5/8" x 4" x 5" (for the tusks)

Tools: scroll saw with assorted blades, spiral blades (optional); drill press with assorted size bits; sanding drums and sanding mop; finish sander with assorted abrasive paper up to 150-grit; tack hammer

Temporary-bond spray adhesive

Red and white transfer paper*

Tracing paper*

Ballpoint pen

0.5mm mechanical pencil

Masking tape

5-minute epoxy

X-acto blades

Wax paper

Cyanoacrylate glue

1/4" Mini-Sanding Arbor** (optional)

Walnut stain

Finish of choice

Turnbuttons*** (optional)

Hanger

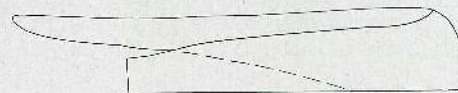
*Available from Dick Blick Art Materials, (800-828-4548) www.dickblick.com.

**Available from Jim Dandy Products, (630-969-8971) www.jimdandy.com.

***Available from The Wooden Teddy Bear, (888-762-9149) www.woodenteddybearonline.com.

For a free catalog of Robert J. Hlavacek's intarsia patterns call: (708) 788-6455; or write: Wildlife Intarsia Designs, P.O. Box 1246, North Riverside, IL 60546; www.wildlifeintarsiadesign.com.

To facilitate the contouring of the tusks, I cut them apart as shown on the pattern. Sand down the top surface of the tusks where they connect to the mammoth. Sand the back surface of the tips for a 3-D appearance. When looking at the mammoth the back of the left tusk tip should be sanded enough to overlay the trunk (see the side view of tusk illustration).



Side view of tusk

Gluing

Place a sheet of wax paper on a flat surface and edge glue the mammoth head together with 5-minute epoxy. Do not glue the eyes or tusks in place at this time; they will be glued after the finish has been applied (see Fig. 7).



Fig. 7. The mammoth head has been glued together. The eyes and tusks will be glued in place after finishing.

After the epoxy sets, position the head on the 1/4"-thick walnut body. Trace around the top of the head and right tusk socket (see Fig. 8). Cut out the body and sand the edges.

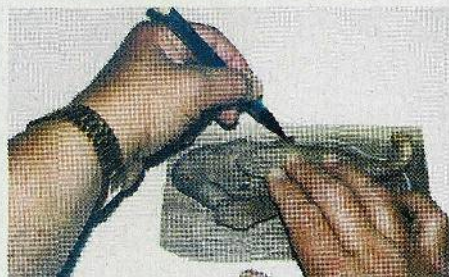


Fig. 8. Tracing around the top of the head and right tusk socket onto the 1/4"-thick walnut body of the mammoth.

Glue the head to the body. To facilitate the finishing process, leave the tusks off until after the finish has been applied. Darken the eyes with walnut stain and glue them in place.

Making the silhouette

Sand the 1/2"-thick wood smooth with 150-grit abrasive and the finish sander. Attach the pattern to the wood with temporary-bond spray adhesive.

A spiral blade does a good job of cutting the outside edge of the plaque (see Fig. 9). With this blade you don't have to swing the wood around in order to cut the irregular edge.

Bore entry holes in the waste areas. Also bore a hole with a No. 60 bit where indicated on the line for the pop-out frame. Tilt the saw table down 6° toward the left and cut in the direction of the arrows (see Fig. 10).

Lay the scroll-sawed portion of the mammoth on the 1/8"-thick plywood backer material and trace around the

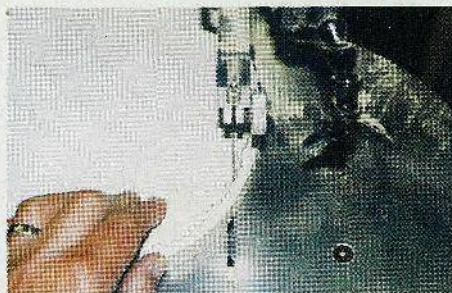


Fig. 9. Cutting the plaque's outside edge with a spiral blade.



Fig. 10. Cutting along the edge at 6° in the direction indicated.

outside edge (see Fig. 11). Cut slightly within the line so the backer fits in the recess behind the silhouette. I used walnut plywood, but you can use other contrasting wood, stained Baltic birch plywood, or mirrored plexiglas if you prefer.



Fig. 11. Tracing for the shape of the 1/8" plywood backer.

Push the silhouette in place and thinly apply cyanoacrylate glue around the joint (see Fig. 12).



Fig. 12. Gluing the relief-cut joint in place.

Finishing

Apply masking tape to the areas

where the tusks, body and plaque meet. This will insure a good glue joint (see Fig. 13).

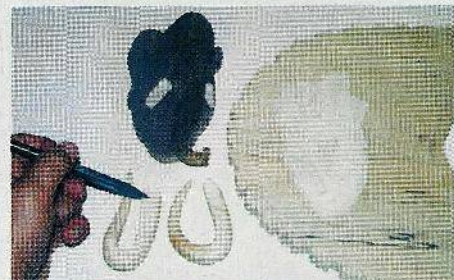


Fig. 13. Masking tape is applied to the intarsia portion of the plaque.

Make a couple of handles for finishing the tusks by cutting a slit in each of two sticks and epoxying X-acto blades in place. Poke a blade in the back of each tusk and apply the finish (see Fig. 14). Also, spray the finish on the intarsia mammoth, silhouette and backer.



Fig. 14. Finishing the intarsia and backer.

Attach a hanger. Insert the backer and fasten in place. I like to use small turnbuttons so the backer can be removed for future cleaning (see Fig. 15).



Fig. 15. Turnbuttons are recommended for attaching the backer.

When the finish is dry, remove the masking tape and glue the tusks in place. Finally, glue the mammoth to the plaque and enjoy your prehistoric creation.

For questions concerning this project, send an SASE to: Robert J. Hlavacek, Sr., c/o All American Crafts Publishing, 243 Newton-Sparta Rd., Newton, NJ 07860.

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Cajun Gator Intarsia

designed by Larry W. Goodwin, of River Ridge, Louisiana;
presented by Robert J. Hlavacek, Sr. of Wildlife Intarsia Designs



Introduction

One of the fringe benefits of being in the pattern business is the great people you meet, and sometimes inspire. One such person is Larry Goodwin, a customer, friend and now designer. Being from Louisiana, Larry wanted some projects with a Cajun theme. This is his first of, hopefully, many contributions.



SUPPLIES

Wood (sizes not specified since scraps were used for this project); *poplar*—3/4" thick, various shades of heartwood (for the green parts of the alligator and foliage); *osage orange*, *ebony* and *walnut*—one small piece of each (for the iris, pupil and left and right edges of the eye); *curly maple*—(for the underbelly); *aspen*—(for the teeth); *western red cedar*—(for the water); *walnut*—(for the cattails); *plywood*—one piece 1/4" x 22" x 12-1/2" (for the backer), small pieces 1/16" and 1/8" thick (for shims)

Tools: scroll saw with assorted blades; drill press with assorted sanding drums and No. 60 drill bit; sanding mop with 120-grit abrasive; finish sander with assorted grit abrasive paper

5-minute epoxy

Slow-set epoxy

Carpenter's glue

X-acto knife

Ballpoint pen

0.5mm mechanical pencil

White and red transfer paper*

Tracing paper*

Masking tape

Wax paper

C-clamps

Hard-backed sanding block

Sandpaper, assorted grits

Hanger

Matte spray or finish of choice

*Available from Dick Blick Art Materials, (800-828-4548) www.dickblick.com.

For a free catalog of Robert J. Hlavacek's intarsia patterns call 708) 788-645; or write: Wildlife Intarsia Designs, P.O. Box 1246, North Riverside, IL 60546; www.wildlifeintarsiadesign.com.

INSTRUCTIONS

I made this project in three subsections: water, alligator, and cattails. When the three sections are completed they will be assembled to complete the project... Here's how:

Transferring the pattern and cutting

Redraw the pattern on tracing paper; this will enable you to see and utilize the grain when transferring the project on the wood. Using white transfer paper on the dark wood and red on the light-colored wood is helpful.

After tracing the pattern on the wood, begin with the water. Cut out a piece, sand the burr off the bottom with a sanding block, and then sand the edge smooth. Place it on top of the piece it will adjoin and draw a new cut line using

the edge as a template (see Fig. 1).



Fig. 1. Using the piece that's been cut as a template for marking the adjoining part.

Cut slightly outside the line (see Fig. 2), then sand to the line (see Fig. 3) for a snug fit (see Fig. 4). Tape the pieces together on both sides to hold them in position.

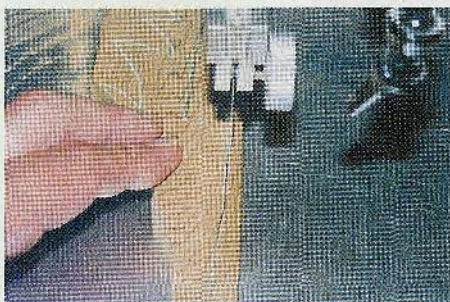


Fig. 2. Cutting outside the line.



Fig. 3. Sanding to the line.

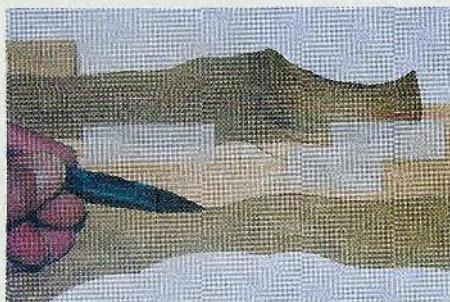


Fig. 4. Cutting outside the line and then sanding to the line produces a nice, snug fit like this.

For the leaves at the bottom, cut the areas in the water first. Cut each leaf in half, tape them together, place

the water with the "V" notch on top and draw a cut line (see Fig. 5). By following this procedure you can sand the leaf to snugly fit in the "V" whereas it would be difficult to sand in the "V" to make the leaf fit. Use masking tape to hold the leaves in place.



Fig. 5. Using the cutouts in the water as templates for laying out the leaves at the bottom of the design.

When assembling the water, allow extra material at the top and right side where the alligator and cattails will be fitted after they are assembled (see Fig. 6).

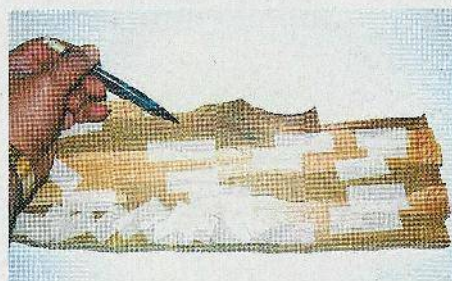


Fig. 6. The assembled water section.

Making the alligator

Transfer the underbelly portion of the pattern on the curly maple. Include the numbers on the pieces to keep them in order. Also, leave a little extra wood on all pieces that are on the right side of the alligator for fitting later (see Fig. 7). After cutting the sections apart, write the numbers on the sides of the pieces so they can be identified after contouring (see Fig. 8).



Fig. 7. Transferring the gator's underbelly onto the curly maple.



Fig. 8. Keep close track of the individual underbelly sections.

Hold the pieces together by putting masking tape on both the top and bottom surfaces. Use an X-acto knife to trim the tape away from the edges. Sand the edge smooth, then position the assembly on the lower jaw and draw a cut line (see Fig. 9). Cut and sand the jaw to fit.



Fig. 9. Using the taped-up underbelly assembly to draw the lower jaw's cut line.

Cut out the areas on the lower jaw for the teeth (see Fig. 10). Position the lower jaw on the teeth and draw a cut line around each tooth (see Fig. 11). When cutting the teeth, leave extra wood on the ends so you'll have something to hold onto while sanding to fit. Also, renumber the side of each tooth since the number on top will be sanded away later (see Fig. 12).

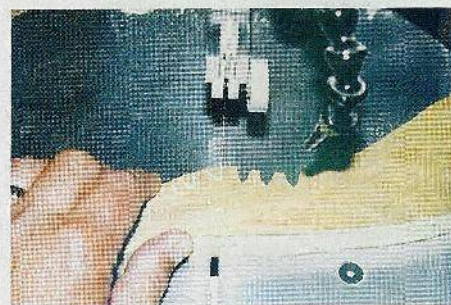


Fig. 10. Cutting the lower jaw.

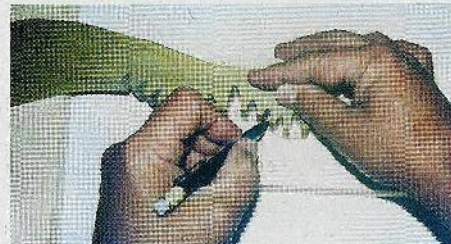


Fig. 11. Using the lower jaw cutouts to mark for the teeth.

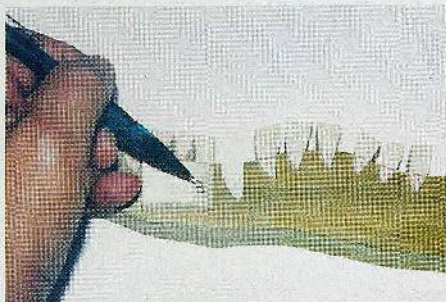


Fig. 12. Renumber each tooth on its side edge.

Tape the teeth in place on both sides, cut even with the jaw (see Fig. 13), then sand the edge smooth (see Fig. 14). Place the lower jaw on top of the upper jaw and draw a cut line (see Fig. 15). Cut and sand to fit.



Fig. 13. Cutting the teeth even with the jawline.



Fig. 14. With the teeth in place, sand the top edge of the lower jaw until smooth.

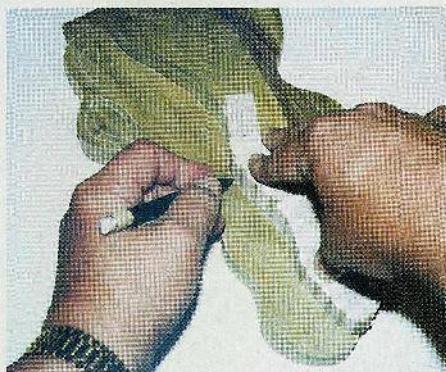


Fig. 15. Using the lower jaw assembly to draw the upper jaw's cut line.

Bore a hole in the corner of the ear with a No. 60 drill bit as shown in Fig. 16 and cut out. Save this piece as it will be glued back in place after contouring. The nostril will be made the same way.



Fig. 16. Cutting the gator's ear.

Making the eye

Cut, fit and glue the ebony pupil to the left and right sides of the osage orange iris, leaving the extra wood on the edges intact (see Fig. 17). Use 5-minute epoxy for this, and don't forget to put a sheet of wax paper down so the pieces don't become permanently attached to your table. Cut, fit and glue the outer pieces in place (see Fig. 18).



Fig. 17. Gluing up the (ebony) pupil with the left and right sides of the (osage orange) iris.

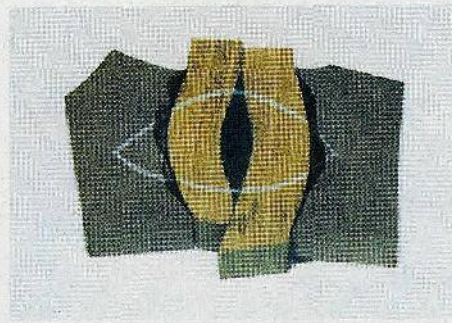


Fig. 18. Adding the eye's outer pieces.

Transfer the eyelids onto a piece of wood. Cut them in half and remove the center. Tape the two halves

together, position over the glued-up eyeball and draw a cut line (see Fig. 19). By having previously assembled and glued the eyeball, we can work with five pieces as easily as one (see Fig. 20).

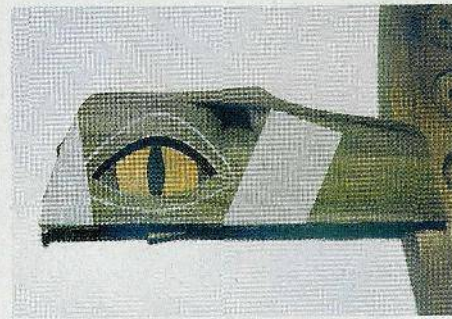


Fig. 19. Place the eyelids over the glued-up eyeball to draw the cut line.



Fig. 20. Shaping the eyeball.

Cut the eye section out of the head, then place the head over the eye assembly and draw the cut line (see Fig. 21). Fit the eye to the head.

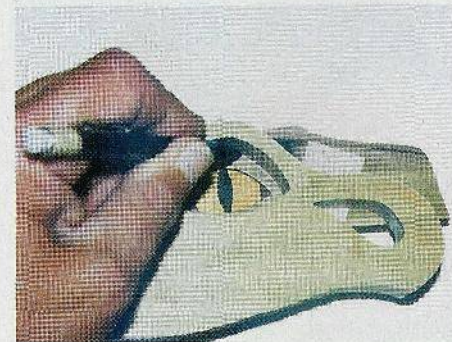


Fig. 21. Drawing the cutline for the eye assembly.

Making the cattails and final fitting

Make the cattail leaves out of various shades of poplar heartwood and the tops out of walnut, following the same procedures used to make the water and alligator.

With the three subassemblies completed, we can put them all together. Place the alligator on the

water and trace a cut line (see Fig. 22). Cut, sand and fit the water to the alligator. Tape them together and repeat this procedure, adding the cattails to the right side.

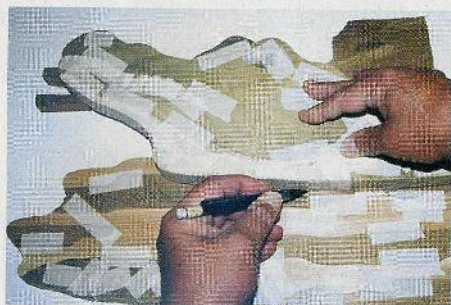


Fig. 22. Tracing a cut line to join the alligator with the water.

Raising and lowering parts

Parts of the project marked $+1/16"$, $+1/8"$, etc. should be raised the amount indicated by cutting a plywood shim of the proper thickness and gluing it to the bottom of the piece. Place the part on the plywood and trace around it. Cut the shim slightly within the line so it doesn't interfere with the adjoining pieces (see Fig. 23).

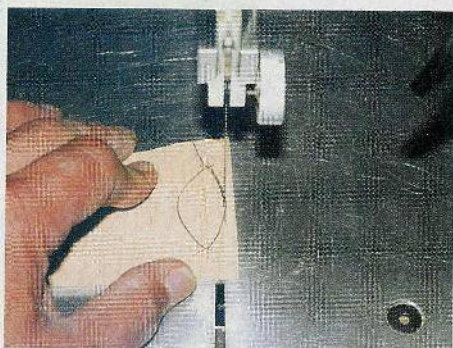


Fig. 23. Cut the plywood shims within the lines.

Lower parts marked $-1/8"$, $-1/4"$, etc. the amount indicated by sanding or resawing (see Fig. 24).

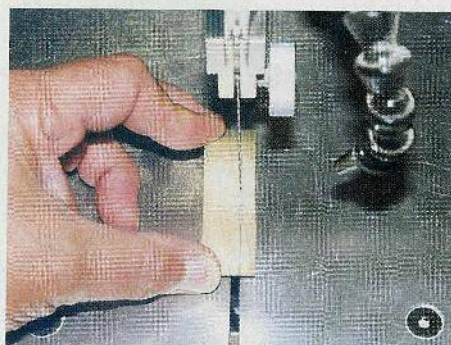


Fig. 24. Sand or resaw to lower the appropriate parts.

Contouring

Use sanding drums in a drill press or a spindle sander to contour the pieces. Refer to the Typical Contours illustration and the picture of the completed project for guidance. The eyeball should always be contoured to a convex shape so it isn't flat.

After contouring a piece, draw a pencil line on the side or sides of the adjoining piece. A 0.5mm mechanical pencil works well as the line is always uniform. This line will be your guide for contouring (see Fig. 25).



Fig. 25. Sand the parts to the contour line.

Use a finish sander to lower the top edge of the lower jaw about $3/32"$ so the teeth appear to protrude (see Fig. 26). You can add $1/16"$ shims under the longer teeth if you like.

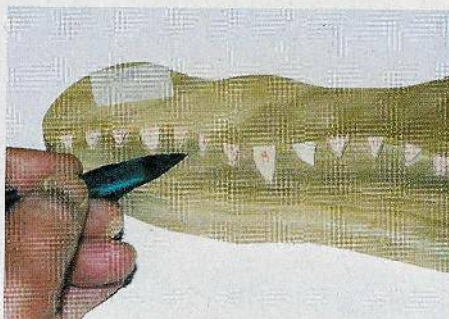


Fig. 26. Make the teeth protrude above the rest of the lower jaw.

When contouring is completed, sand the pieces smooth either by hand sanding, or use a sanding mop (see Fig. 27).



Fig. 27. Sanding the pieces until smooth.

Gluing and finishing

Since this project has so many pieces, I glued it together in sections, beginning with the water at the bottom. Don't forget to put a sheet of wax paper down first. Edge-glue the pieces of the water together. For this I used carpenter's glue applied with a small bellows dispenser. Keep the glue line on the lower half of the pieces and don't use too much so as to avoid squeeze out. After the glue has set, clamp the water assembly to the table. Edge-glue the cattails to the right side of the water. I used 5-minute epoxy for this in order to get a good bond between the seed pods and the stems. When dry, clamp the water and cattail assemblies to the table. This will provide a solid base on which to assemble the alligator.

Use slow-set epoxy to edge-glue the many small pieces of the alligator together; slow-set will give you time to adjust the pieces and align them properly (see Fig. 28), and if epoxy should squeeze out it won't mar the surface when the finish is applied.

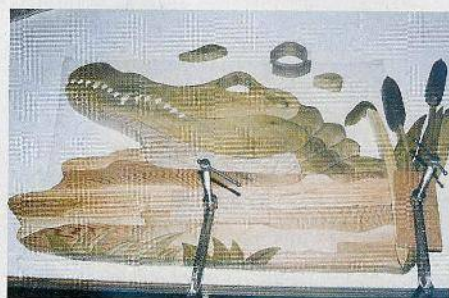


Fig. 28. Gluing up the gator with slow-set epoxy

Sand the back of the alligator with the finish sander to remove wax paper residue. Lay the project on the plywood backer and trace its outline, making sure the grain runs vertically in order to add strength to the cattail pods. Cut the backer slightly within the line and glue it to the project with carpenter's glue. Use small C-clamps with scraps of plywood to protect the face of the project and insure a good bond.

Apply the finish of your choice. I used Krylon matte acrylic on this project. Now just add a hanger and enjoy your Cajun creation!

For questions concerning this project, send an SASE to: Robert J. Hlavacek, Sr., c/o All American Crafts Publishing, 243 Newton-Sparta Rd., Newton, NJ 07860.





Potato Head Football Player

by Dave Disselbrett

SUPPLIES

Wood: basswood—one piece 2" x 2" x 3"

Tools: carving knife; small gouge
Paints of choice

Introduction

I have been carving for many years. I started with Boy Scout neckerchief slides. About 10 years ago, I moved to Salem, Oregon, where I got involved with the Capitol Carvers. With their encouragement I kept

carving and became involved with the organization. The more I carved, the more I learned. I kept doing new projects and trying new items.

In 1998, I started teaching monthly classes at the Keizer Art Association. I now teach classes in Eugene, Portland, Longview and McMinnville, Oregon. I have instructed at the Glacier Rendezvous and have demonstrated at various meetings.

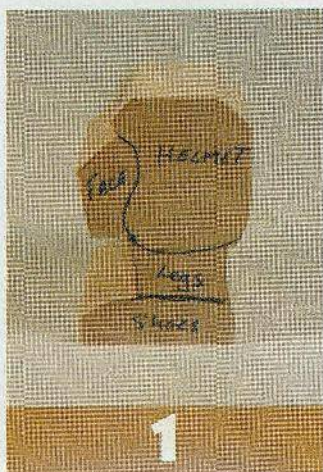
This football player is one of my potato head patterns. The carving can be painted in your favorite team colors.

Here's a great tailgate party idea:

You can drill a 3/4" hole in the top if you'd like to make a toothpick holder.



INSTRUCTIONS



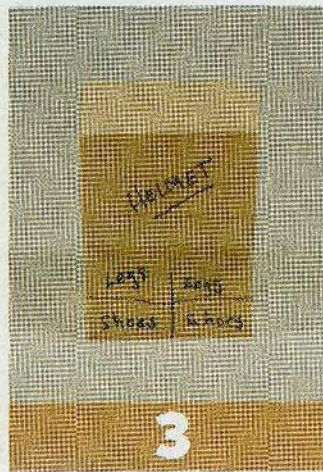
1

Cut out the side view and mark the appropriate sections.



2

The front view.



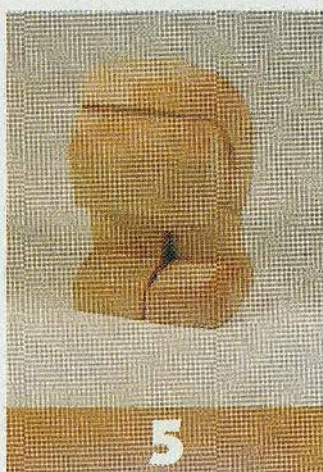
3

The back view.



4

The corner view.



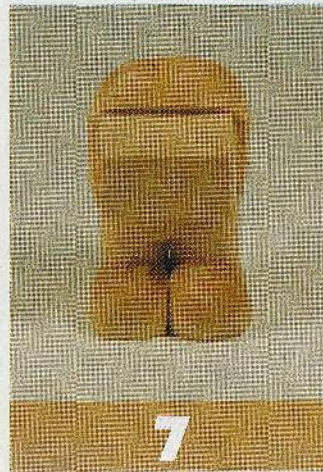
5

Round the corners and start outlining the face.



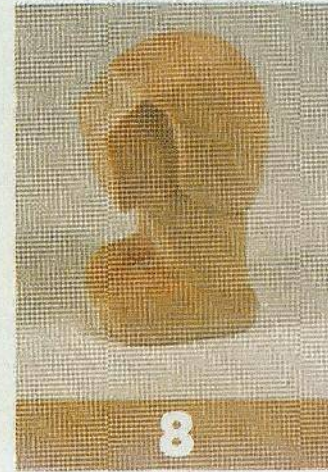
6

The back view of the rounding process.



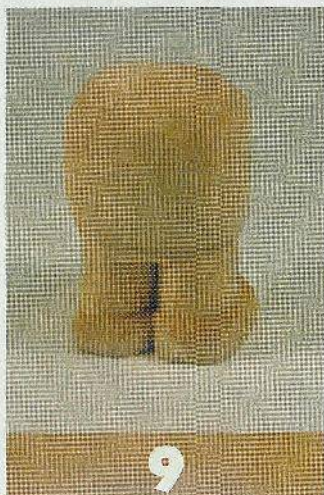
7

This is what the front should look like before starting the face.



8

The side view.



The back view.



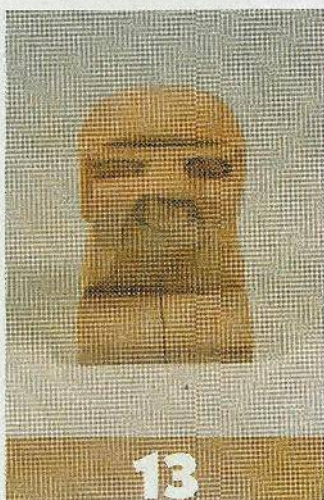
Start the eye sockets far enough down to leave a forehead.



Start the eyes.



Set the eye sockets and place the smile lines for the mouth.



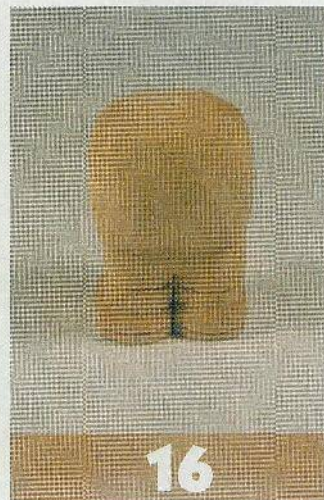
Use a small gouge above the eye. Use a knife to outline the eyeball.



Use a knife to pick the corners of each eye and round the eyeball. Finish the mouth.



Here is the side view of the carved head.



The back view.



The carving is finished.



Paint your favorite team colors.



Here's another view of the painted project.



And another. Enjoy!

I sell blocks for this project as well as many others. For further information or questions concerning this project email me at: Disselbret@aol.com.



Myths and Facts about Saw Blade Steel

continued from page 45

What does carbon do for saw blades?

Carbon steel, by definition, is steel that has only carbon added as the alloying element. The addition of carbon, followed by heating and quenching, changes the steel from a softer material to a harder one. Carbon steel has various amounts of carbon in it, which is classified by a numbering system. Depending on the use of the steel, a specific number related to the amount of carbon needed is used when purchasing steel, but I will not go into the specifics of the numbering system at this time.

The amount of carbon in the steel defines the hardness and strength. So, the more carbon in steel, the harder it is. The tensile (stretching) strength and the resistance to wear increase. In other words, the cutting edge of a saw blade will last longer. Other benefits of carbon are less warping or cracking and a decrease in ductility and malleability.

There are other classes of steel that contain many additional elements and can also be used for saw blades. But like everything else, the more features added, the more expensive it becomes. So, for saw blades, plain carbon steel is a fine choice.

Finally, there is the testing of hardness. The tests are conducted by making a small dent in the steel with an instrument, and then measuring how deep the dent is. The tests cannot be conducted, however, without special equipment, because the depth of the dent is minuscule.

The most common tests used are Brinell, Rockwell, and Micro Hardness. Brinell and Rockwell are similar to each other in operation. Both systems use a penetrator under pressure to make an indentation in the steel from a calibrated machine. Then the impression depth is measured using a special gauge installed on the machine. The gauge reads the depth and a conversion number is assigned. The numbers obtained relate to a standard for hardness.

The third test, Micro Hardness, also uses pressure and penetration, but the difference is that micro hardness can actually determine the hardness of a single crystal. The machine is very expensive and resembles a large microscope. With this test, the indentation is in the shape of a diamond. The width of the indentation is measured under the microscope and then a cross-reference table is used to determine the hardness. If pinpoint accuracy is needed, then the micro hardness tester is the instrument to use.

There is a point where carbon steel reaches its maximum hardness and can-

not get any harder. I mention this because I have seen hardness numbers that are not achievable, which sound good to the consumer.

So, as you can see, ordinary people will not be able to measure hardness at home. However, there is a simple method that can be taken to determine the relative hardness of a blade. Take a blade and hold it at each end. Then make a loop about three-quarters to one inch in diameter. Let go of one end. The blade should snap back close to the straight position but not entirely straight. If the blade breaks before the loop is made, it is too brittle; and, conversely, if the blade remains twisted, it is too soft. This is by no means a hard, fast rule, but if you feel there is a problem with

a blade, it will at least give you an indication about the heat-treating.

Well, I hope this has cleared up some trouble spots some of you might have had about steel, and I also hope that it gave you some insight into what it takes to make the steel work for saw blades.

Ralph Costa is a design engineer and has worked in the saw blade industry for the past 15 years. He has designed equipment for fabricating saw blades, developed new processes, and consulted for companies worldwide. Ralph is currently Worldwide Sales and Product Development Manager for Scies Miniature SA and Grobet USA, the manufacturers of Pegas saw blades.

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Turned Magnifying Glass

by Joseph M. Herrmann of Timber Treasures



SUPPLIES

Wood: cocobolo—three pieces, each 1" square x 1-1/4"

Tools: band saw; mitre box saw; drill press with 7mm drill bit and 7mm barrel trimmer; lathe with assorted chisels; universal mandrel with 10mm bushings; buffing system

Thick superglue

Danish oil finish

Assorted abrasive discs and paper

Buffing compounds

PK-1221 Magnifying Glass Kit, \$ 7.95*

PK-1007 Pen Tube Insert, \$9.40*

PK-1391 7mm Barrel Trimmer, \$16.95*

PK-1285 10mm Bushings, \$9.00*

*Available from: Steebar Corp., (973) 383-1026; P.O. Box 980, Andover, NJ 07821; www.penmakingsupplies.com

Introduction

When I was a kid, my grandmother would sit in her parlor and work on her crocheting projects. Whenever she needed to refer to the directions, she would pull out her trusty magnifying glass, which would help her to read. She also used it when she worked her crossword puzzles after supper.

Of course, my brothers and I would always "borrow" her glass to start small campfires, which we would use to cook lunch—in addition to all the other adolescent things that boys would do! We sure had a lot of fun with that old lens!

I got this project kit from Steebar (#PK-1221, \$7.95). It contains one of the nicest optics I've seen in a magnifying glass kit. The glass portion is about 2-1/4" in diameter, is blemish free and enlarges the object several times. It's very well made.

INSTRUCTIONS

Selecting and preparing the stock

I chose cocobolo for my project, but any other hard, dense, exotic wood would work. I used cocobolo because I like the look of it and I am partial to the way it turns and sands. I've learned over the years doing craft shows that cocobolo is my #1 selling wood for men—and women find it attractive too.

As I mentioned, other woods could also be used, but I would stick with the exotics; domestic hardwoods just don't seem to have the "pizzazz" of the exotics and don't attract as much attention!

Begin the project by squaring up a piece of stock to 1" square and then cutting off three pieces of wood to 1-1/4" in length. It is important that the wood be turned in the same sequence that it was cut, so be sure to mark it as shown in **Fig. 1**.

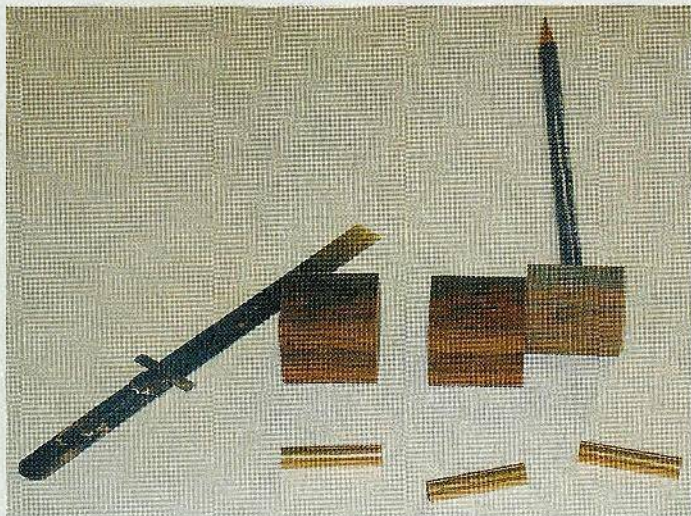


Fig. 1. Mark the wood parts carefully—it's important to turn them in the same sequence they were cut in.

I found the center of each piece and marked the right-hand end of the stock. The drill bit has a tendency to "wander" as the hole is drilled; it is more important that the right-hand end of the wood be centered. I used a 7mm drill bit in my drill press to drill out the stock.

Use the thick cyanoacrylate adhesive (superglue) to glue the tubes into the stock. I used the Pen Tube Insertor (#PK-1007, \$9.40) sold by Steebar to help glue in the tubes. The brass tubes are placed on the end of the rod; super-

glue is applied to the surface of the tube and it is pushed into the hole in the wood. I like to turn my wood on its end after the tube is inserted so the tube will be flush with at least one surface of the stock. Allow the glue to cure for an hour or two.

Lock the 7mm Barrel Trimmer (PK-1391, \$16.95) into the drill press and elevate one of the three blocks as shown in **Fig. 2**. The drill rod on the trimmer is too long to drill these shorter blanks without hitting the table, so I drilled a hole in the middle of a larger block to allow the trimmer to square up the block without interference. Do both ends of the blanks, removing only as much wood as is necessary to square up the ends of the blanks. Not only does the trimmer square up the ends of the blanks, but it also removes any excess glue that might have gotten into the interior of the tubes.

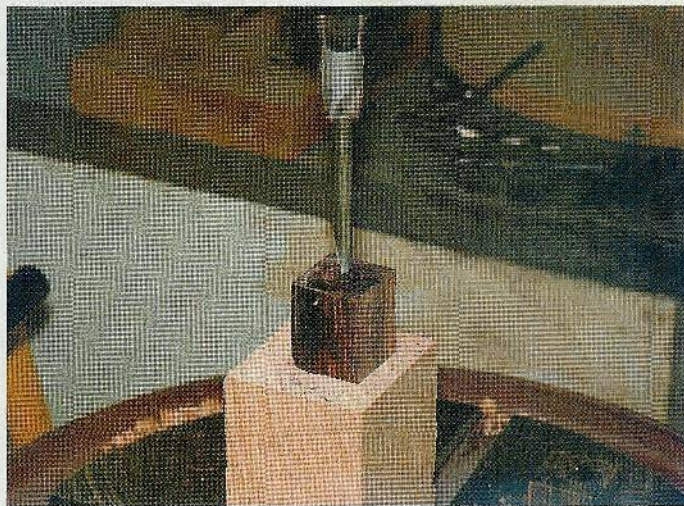


Fig. 2. Using the 7mm Barrel Trimmer in a drill press not only squares up the blanks' ends, but it also removes excess glue from the interior of the tubes.

Mount the stock on the lathe

Mount the stock in the proper sequence on the turning mandrel as shown in **Fig. 3**. I used some extra 10mm bushings to space out my blanks as shown.

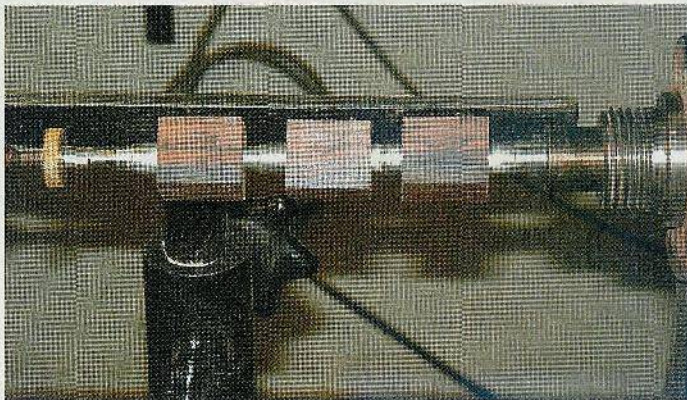


Fig. 3. Here's the stock, mounted in the correct sequence, on the turning mandrel.

Standard 7mm bushings come with this kit, and they are fine if you are going to turn the regular straight handle as is

pictured in the catalog. However, I decided to turn a different shape for my handle and needed the extra diameter to do so. The 10mm bushings allowed me a little more leeway in the design.

Turn the shape

Begin the turning process by transforming the square stock into a cylinder with a 3/4" skew chisel. You could also use a roughing gouge to do this.

I chose to make the bulbous end of the handle (see pattern) on my right when addressing the lathe (opposite of the photo) because I find this easier. However, it really doesn't matter which end is which. I turned a half bead on the right-hand end of the blank and tapered it down to a half-cove on the left. Be sure to form a long flowing bead/cove detail as shown in **Fig. 4**. The bushings are still a little too small, so I made sure that I kept the stock just slightly proud of the bushings.

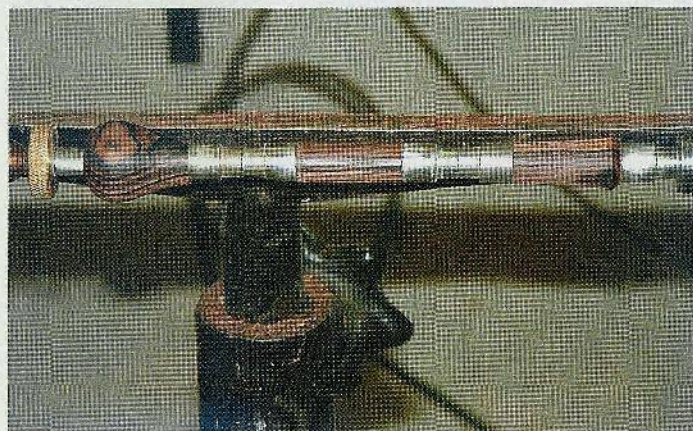


Fig. 4. Here's the magnifier's handle, turned to shape on the lathe.

The middle block is turned into a simple cylinder as shown, again keeping the stock just slightly proud of the bushings.

The left-hand block is turned to a long cove on the right and a chamfer on the left, again staying slightly proud of the bushings. I used the skew chisel to accomplish all this, but a spindle gouge could be used as well. Use the tools with which you are most comfortable.

Sand the project

I power sand whenever I can. I think it is easier than hand sanding, it is certainly much faster, and I think it does a better job. Fortunately, my turning did not contain a lot of tear out or tool marks, so I was able to start with a 320-grit abrasive Velcro™ disc mounted on a padded mandrel. I sanded the turning smooth and then switched to a 400-grit disc.

When I'm finished power sanding, I like to use a piece of 400-grit abrasive paper to sand the project by hand lengthwise, with the grain, with the power off. This aligns all the "scratches" with the grain (making them harder to see) and removes any circular marks that might have been left over from the power sanding process. When you come right down to it, sanding is nothing more than making increasingly smaller scratches in a controlled situation until you get them so small that they are invisible to the eye.

Finishing the handle

I finished this handle as I do all my small projects: One coat of Danish oil is applied liberally, allowed to sit for 5 minutes, and the excess removed with a dry cloth. The oil is allowed to cure overnight and then the project is buffed with the three-step process that I have detailed in other articles.

I generally remove the small blocks from the mandrel after the oil is applied—usually because I have more projects to turn. However, this time I was in no hurry and left them on.

When I went to buff the small pieces I found that they were much easier to buff while they were still attached to the mandrel. Usually small parts, such as these, are very difficult to hold in your fingers while being buffed.

Assemble the parts

Once the parts are polished and shined, it's time to put them all together. Take some time to study the parts in order to see how the grain matches; you want to keep it aligned on each part.

I started with the bulbous end of the handle, inserted the end cap and pressed it home on my drill press.

Then I pressed the two connectors into the middle segment, one on either end. I then connected the bulbous end to the middle segment, again using the drill press.

Next, connect the upper segment to the rest of the handle. **BE SURE** that you have lined up the grain on all the segments.

Finally, the assembled handle must be connected to the optic portion of the magnifying glass. As shown in **Fig. 5**, I placed some padding on the table of my drill press, lined up the connector with the handle and pressed it home, just as before.



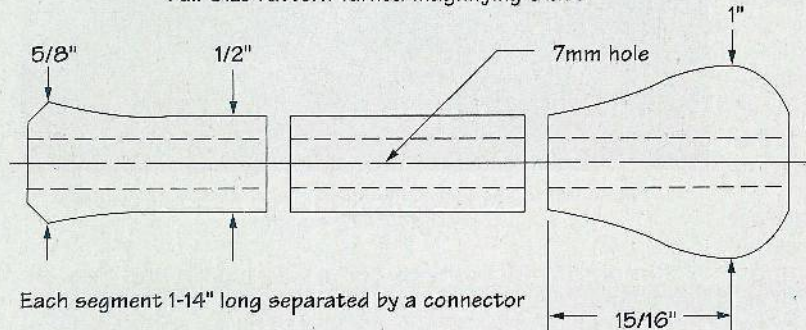
Fig. 5. To complete the assembly, line up the connection with the handle and press it into place.

Conclusion

I think that this project would make a really good project for craft shows and, depending on your area, I think that they would easily sell in the \$35.00 to \$45.00 range. Not bad for about 15 minutes of work!

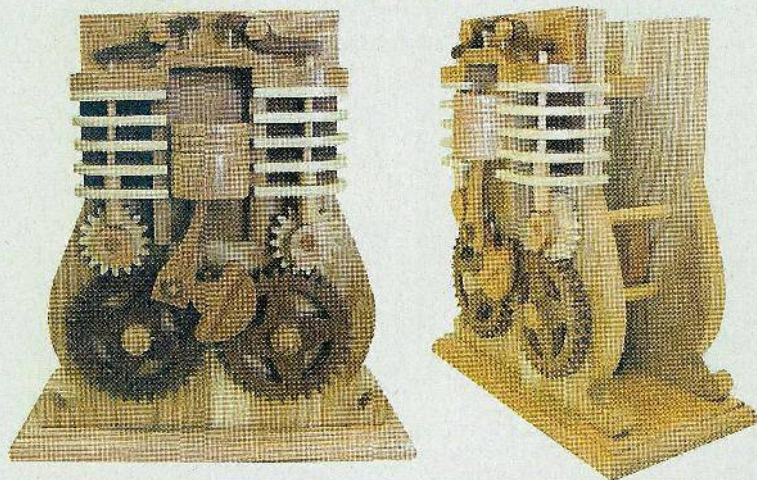
For questions concerning this project, send an SASE to: Joseph M. Herrmann, 160 West Cedar Street, Jefferson, Ohio 44047. Email: lathe Turner@earthlink.net

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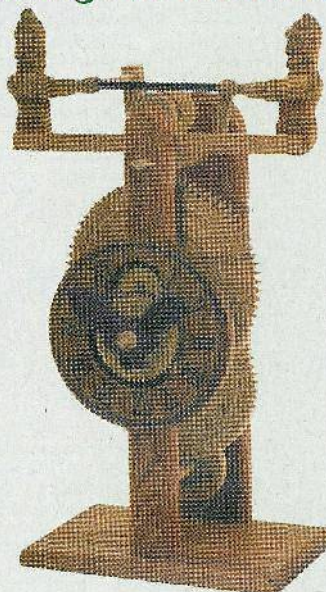
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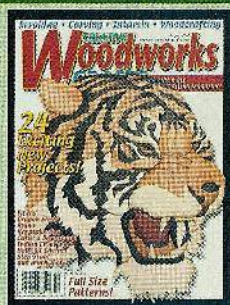
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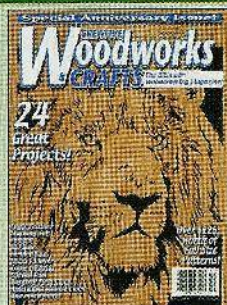
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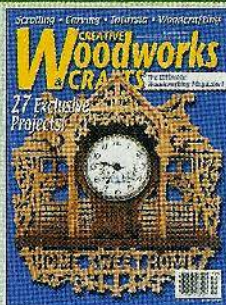
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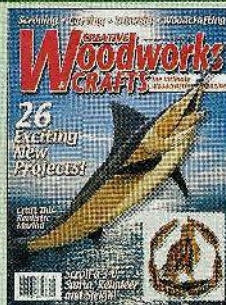
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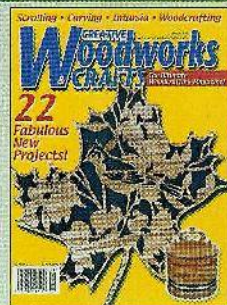
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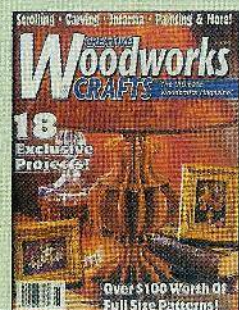
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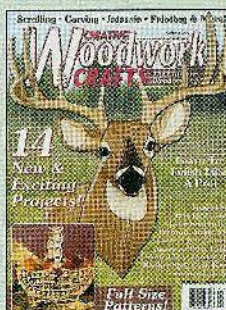
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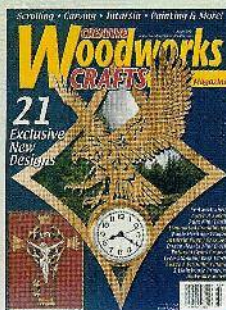
OCTOBER 2000
Deer Intarsia, Fretwork Basket, Fretwork Music Box, Oak Leaf Clock, "American Pride Eagle", and more!



NOVEMBER 2000
Nine Cross Ornaments, Bass Mini Clock, Ship in a Bottle Silhouette, Nautical Shelf, Trout Frame, Southwestern Box, Pheasant Clock, and more!



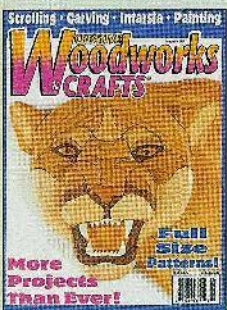
MARCH 2001
Wild Turkeys, Fretwork Music Box, Nascar Plaque, 3-Dragons Nightlight, Fretwork Cross Candleholder, Grizzly Bear, Hawk, Sharpening Carving Tools, and much more!



APRIL 2001
Patriotic Plaque, Breadboard, K-9 Rookie Desk Set, Ram Mini Clock, Fretwork Shelf, Two Lighthouses and more!



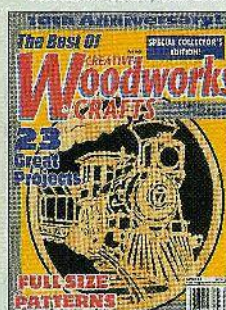
JUNE 1997
Tiger and Eagle Mini Clocks, Midnight Snacker (Raccoon) Intarsia, Fretwork Eagle, Carving a Frame, Christopher Mantel Clock, and more!



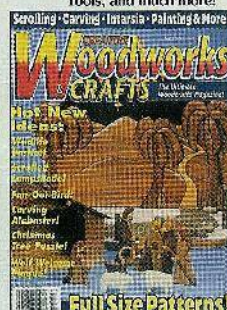
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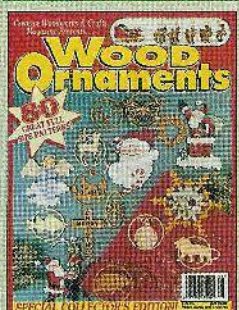


NOVEMBER 1998
Christmas Tree Puzzle, Mallard Silhouette, Wolf Welcome Plaque, Wild West Lampshade, and more!

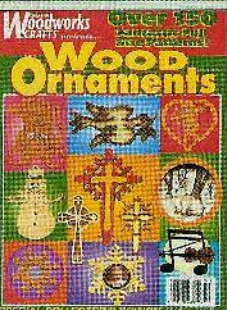


JANUARY 1999
Dragon Shelf, Slotted Ornaments, British Naval Flintlock (Intarsia), and more!

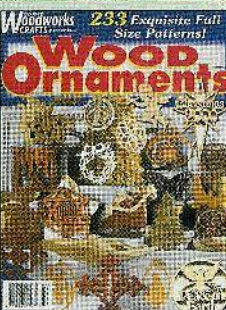
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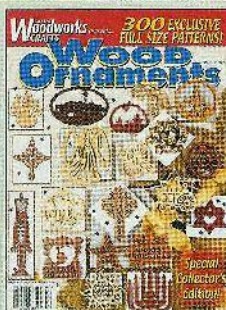
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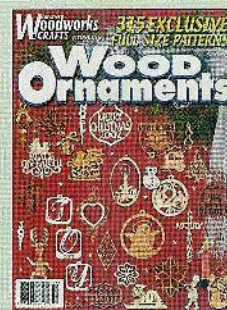
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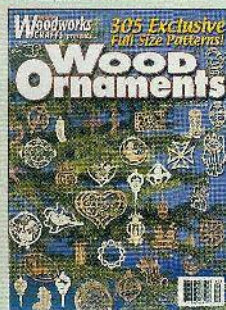
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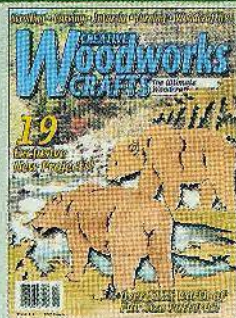
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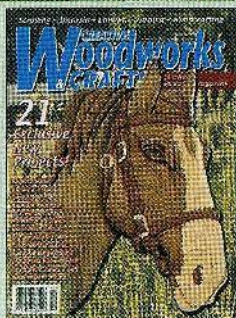
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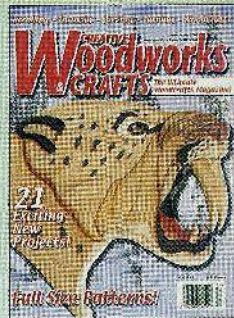
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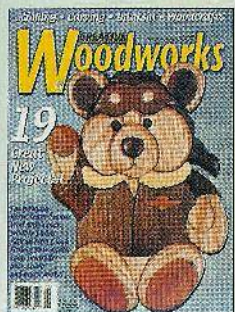
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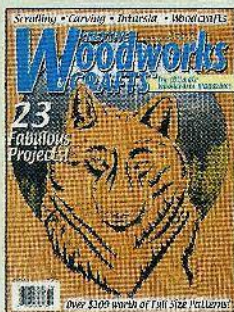
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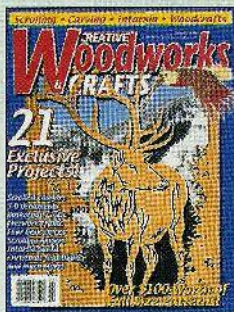
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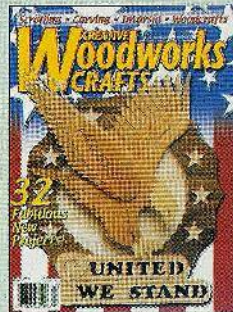
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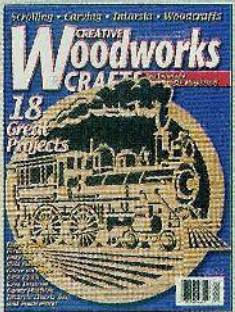
JANUARY 2002
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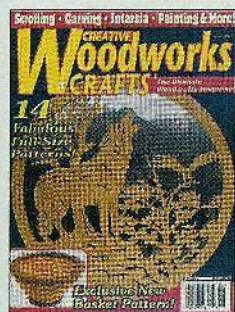
MARCH 2002
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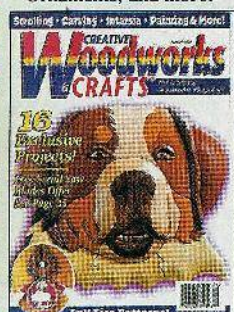
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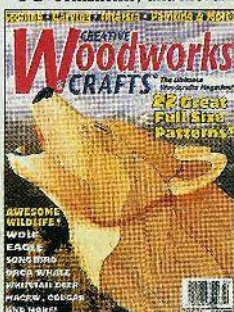
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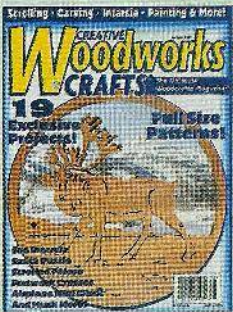
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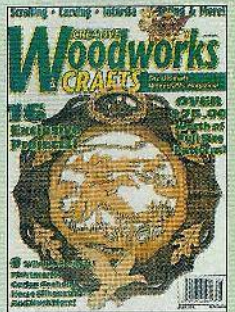
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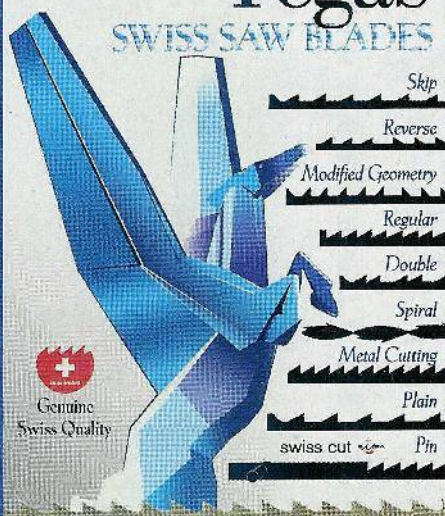
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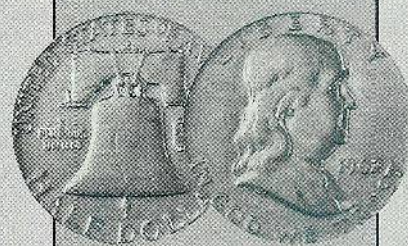
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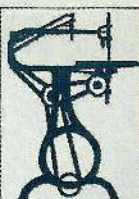
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- #109 - 3/8"x12"x24" - \$3.40
- #104 - 1/2"x12"x12" - \$2.00
- #110 - 1/2"x12"x24" - \$3.90
- #105 - 5/8"x12"x12" - \$2.95
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- #5242A - 1/16"x12"x24" - \$4.40
- #5249 - 1/8"x12"x12" - \$1.70
- #5249A - 1/8"x12"x24" - \$3.30
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Great for scrolling or Wood Burning !!

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Plywood in many different species. Give us a Call !!!



2 inch Precision Machine Square
A must when stack

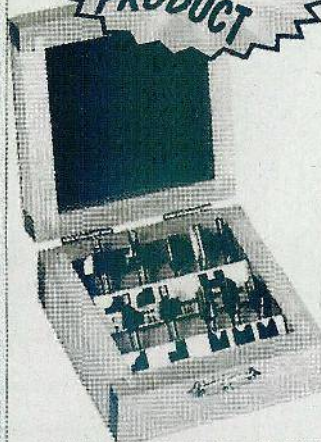
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10 piece - 1/8" Shank Router Bit Set

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Hard Maple	#MPL186	\$3.95	#MPL146	\$4.45	#MPL386	\$5.25	#MPL126	\$5.25
Basswood	#BAS186	\$3.83	#BAS146	\$4.11	#BAS386	\$5.04	#BAS126	\$5.20
Walnut	#WAL186	\$4.45	#WAL146	\$4.95	#WAL386	\$5.95	#WAL126	\$5.95
Cherry	#CHY186	\$4.75	#CHY146	\$5.25	#CHY386	\$6.25	#CHY126	\$6.25
Purpleheart	#PHT186	\$4.25	#PHT146	\$4.95	#PHT386	\$5.95	#PHT126	\$6.95
Mahogany	#MAH186	\$5.00	#MAH146	\$5.60	#MAH386	\$6.50	#MAH126	\$6.75
Padauk	#PAD186	\$5.15	#PAD146	\$5.75	#PAD386	\$6.75	#PAD126	\$7.25
Canarywood	#CAN186	\$4.95	#CAN146	\$5.45	#CAN386	\$6.25	#CAN126	\$6.75
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\$2.30 a Doz - \$23.00 a Gross

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Orange, Pink, Purple, Peach,
Gold, Bronze, Gray, Clear
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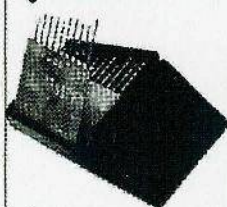
1/4"x12"x24"

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Use mini bits in a drill press with this
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20 Piece Mini
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#61 - #80
metal case
#20pcDS
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Mini Drill Bits

1/16", 3/32", 1/8" Bits \$4.50 Doz

Numbered Drill Bits

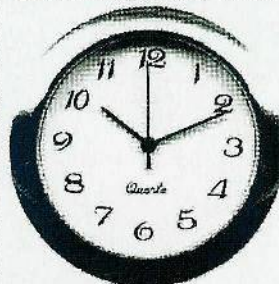
#54, #56, #58, #61, #64,
#67, #70, #72

\$ 7.50 per Dozen

(sorry no mixing sizes of drill bits)

Top Quality Silcon Brand Inserts

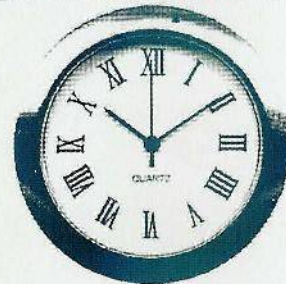
No low quality economy inserts sold here !!!



#CK100 - White Arabic

#CK103 - Ivory Arabic

#CK102 - Gold Arabic



#CK101 - White Roman

#CK104 - Ivory Roman

#CK105 - Gold Roman

1+ \$4.75 ~ 10+ \$4.35 ~ 30+ \$3.95 ~ 100+ \$3.65

1 7/16" Inserts, Glass Lens, Stainless Steel Back, With Battery
NO RUBBER GASKETS - MIX OR MATCH PRICING !!!



#CK106

1 7/16" Fancy Gold & Black
Dial, Arabic Numbers

1+ \$5.50 - 10+ \$5.20

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We now have 2" Photo Inserts !!!

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3/4" dia. 6" long, tops
have hangtabs

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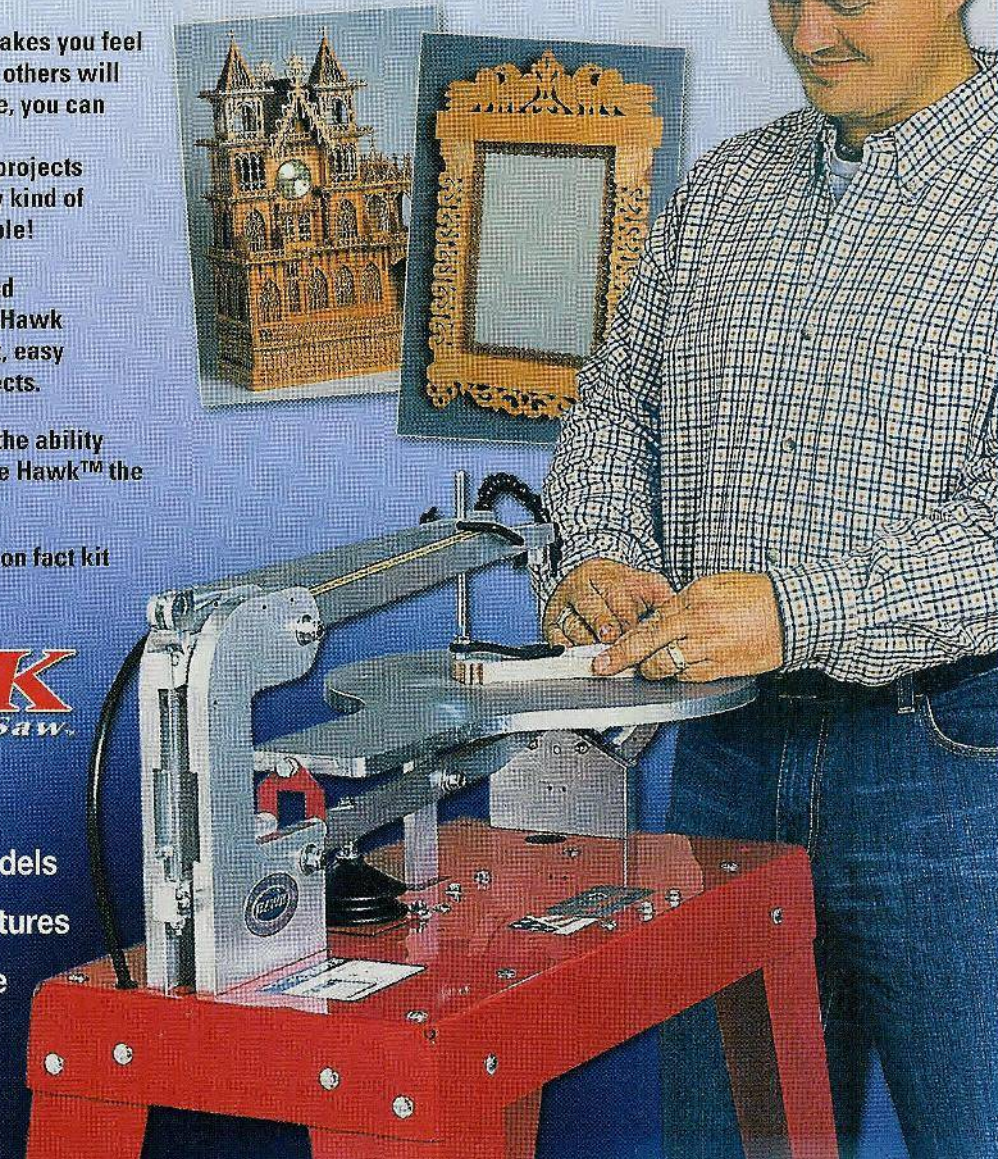
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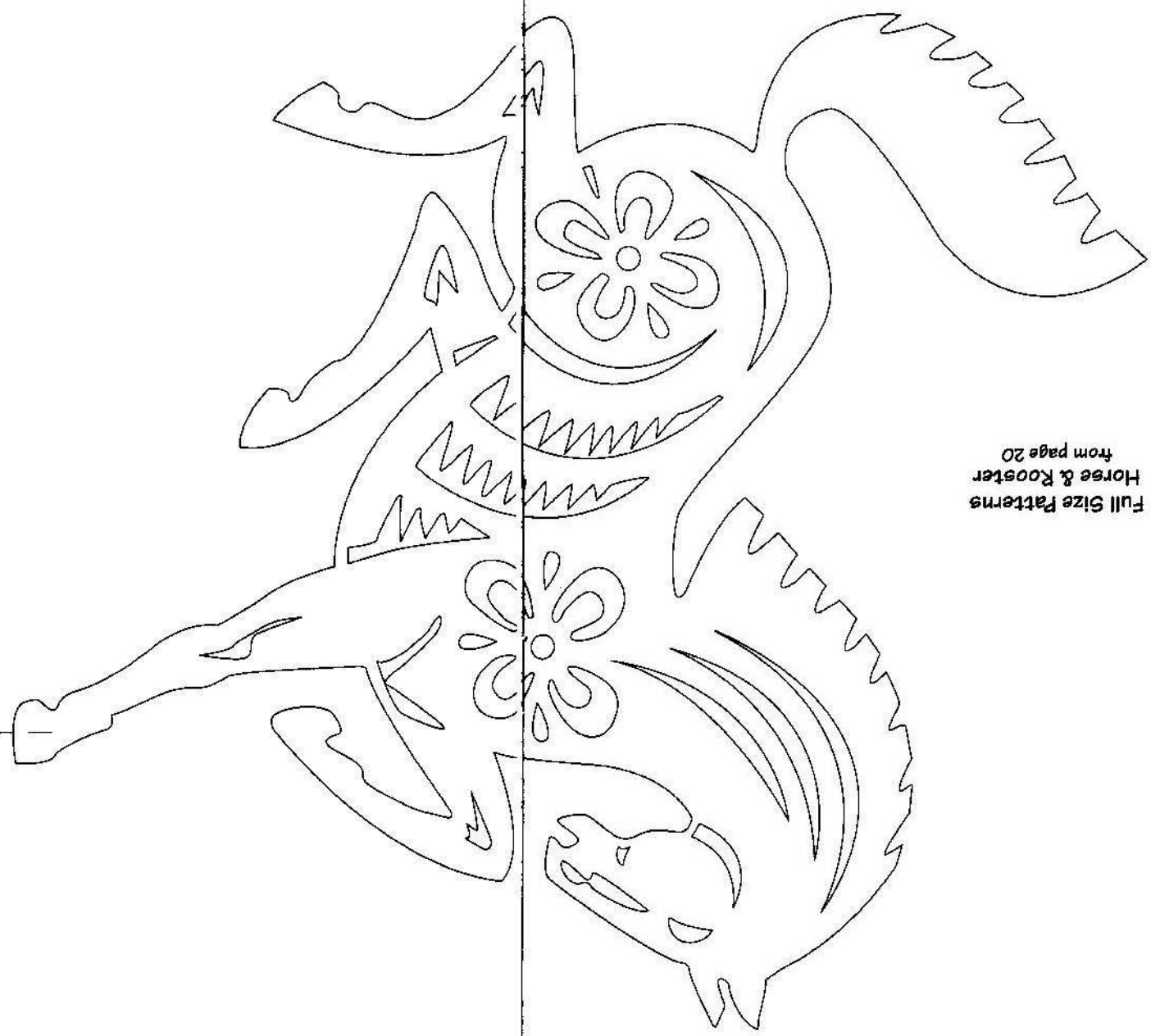
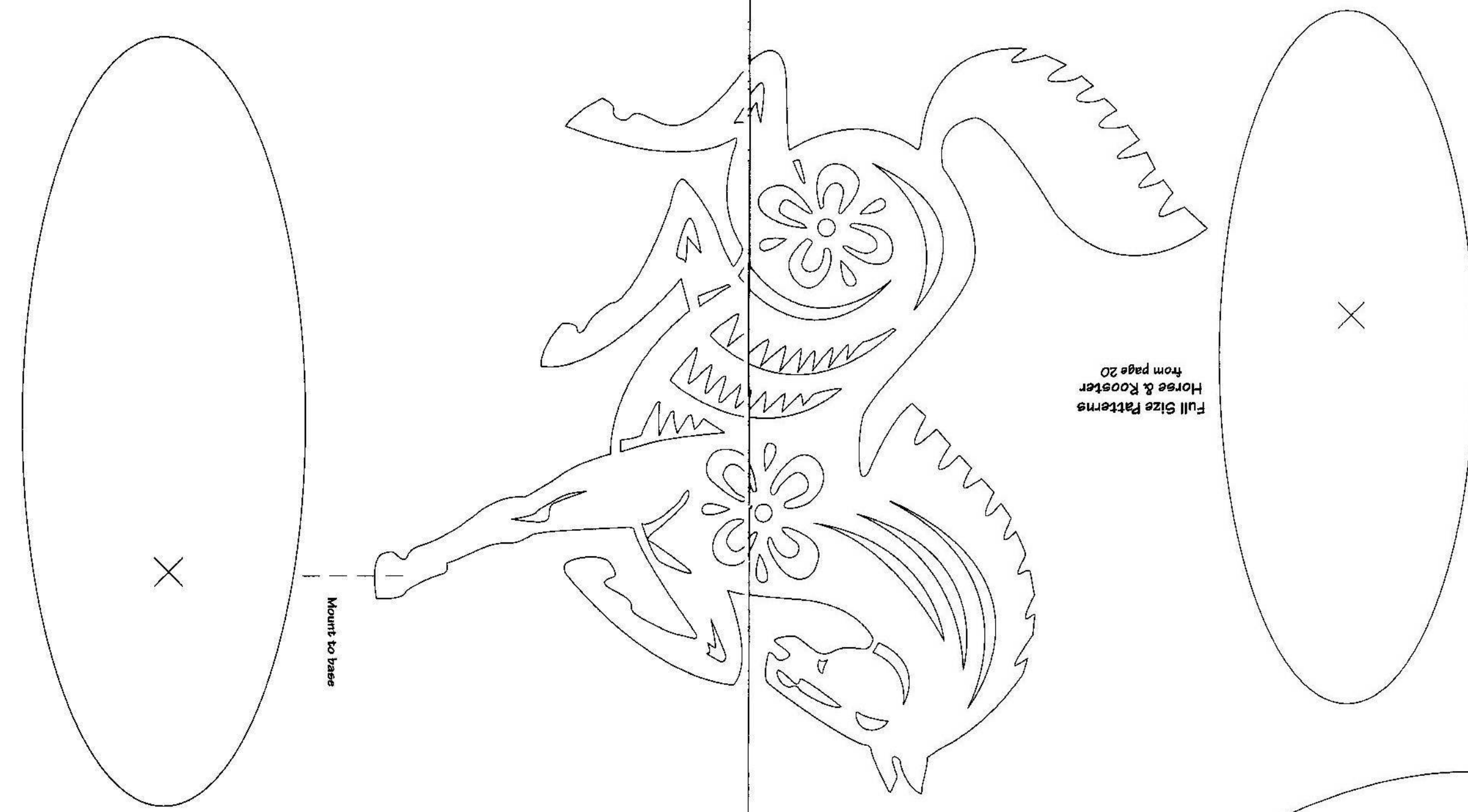
Call 1-800-487-2623

1a

2a

3a

4a



FULL SIZE PATTERN SECTION NO. 1 MARCH 2004

Side A
 Fire-Breathing Dragon..... from page 6
 Caribou Weather Station..... from page 12
 Horse & Rooster..... from page 20
 Corian® Trivet..... from page 61
 Side B
 The Predator..... from page 28
 Small Mouth Bass..... from page 32
 Potato Head Football Player..... from page 71

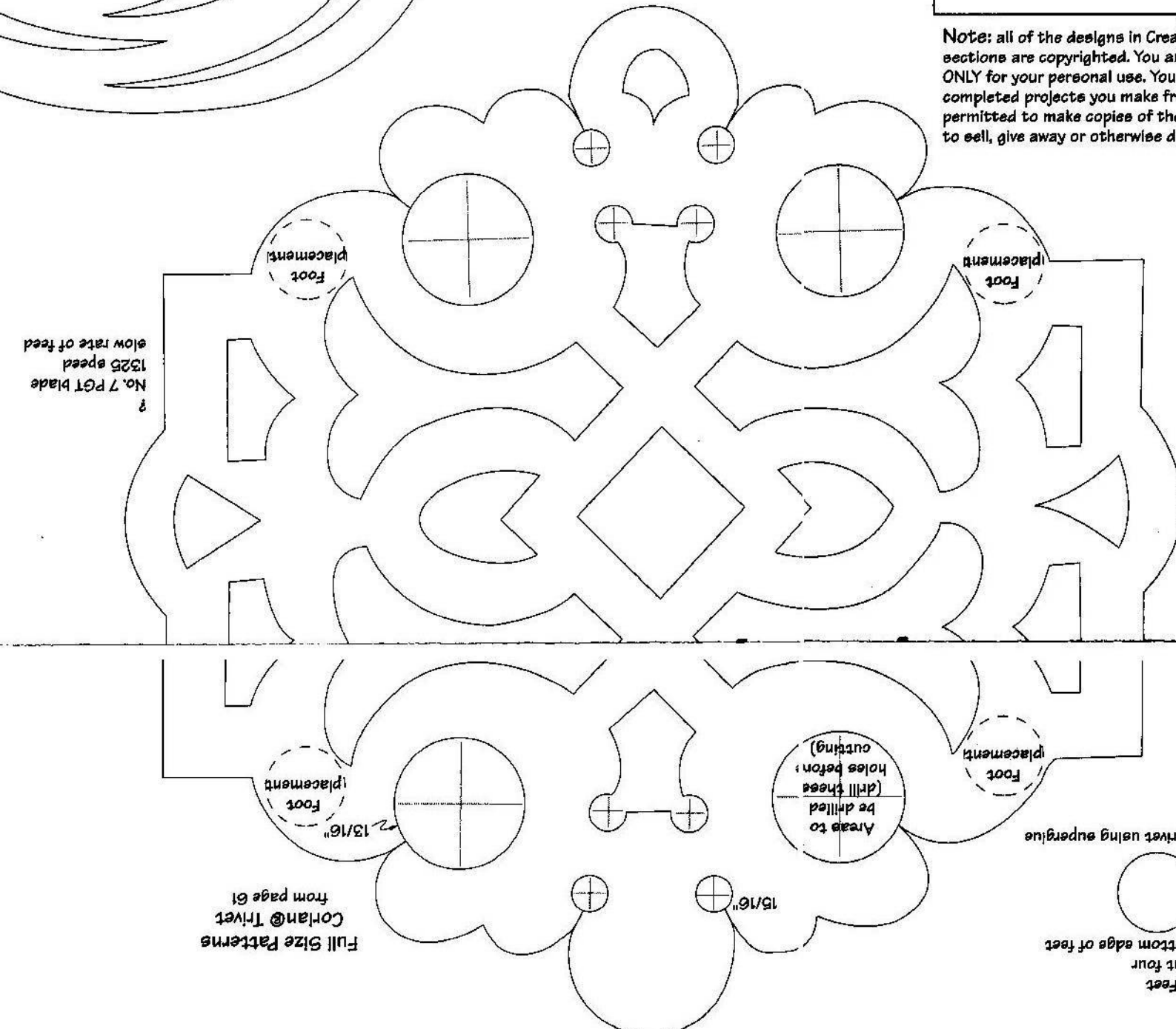
Metric Conversions:

1 inch = 25.4mm = 2.54cm = 0.0254m

Common Measurements:

1/16" = 1.59mm	5" = 12.70cm
1/8" = 3.18mm	6" = 15.24cm
1/4" = 6.35mm	7" = 17.78cm
3/8" = 9.53mm	8" = 20.32cm
1/2" = 1.27cm	9" = 22.86cm
5/8" = 1.59cm	10" = 25.40cm
3/4" = 1.91cm	11" = 27.94cm
7/8" = 2.22cm	12" = 30.48cm
1" = 2.54cm	24" = 60.96cm
2" = 5.08cm	36" = 91.44cm
3" = 7.62cm	48" = 1.14m
4" = 10.16cm	60" = 1.52m

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8a

No. 7 PGT Blade
 13/25 speed
 slow rate of feed

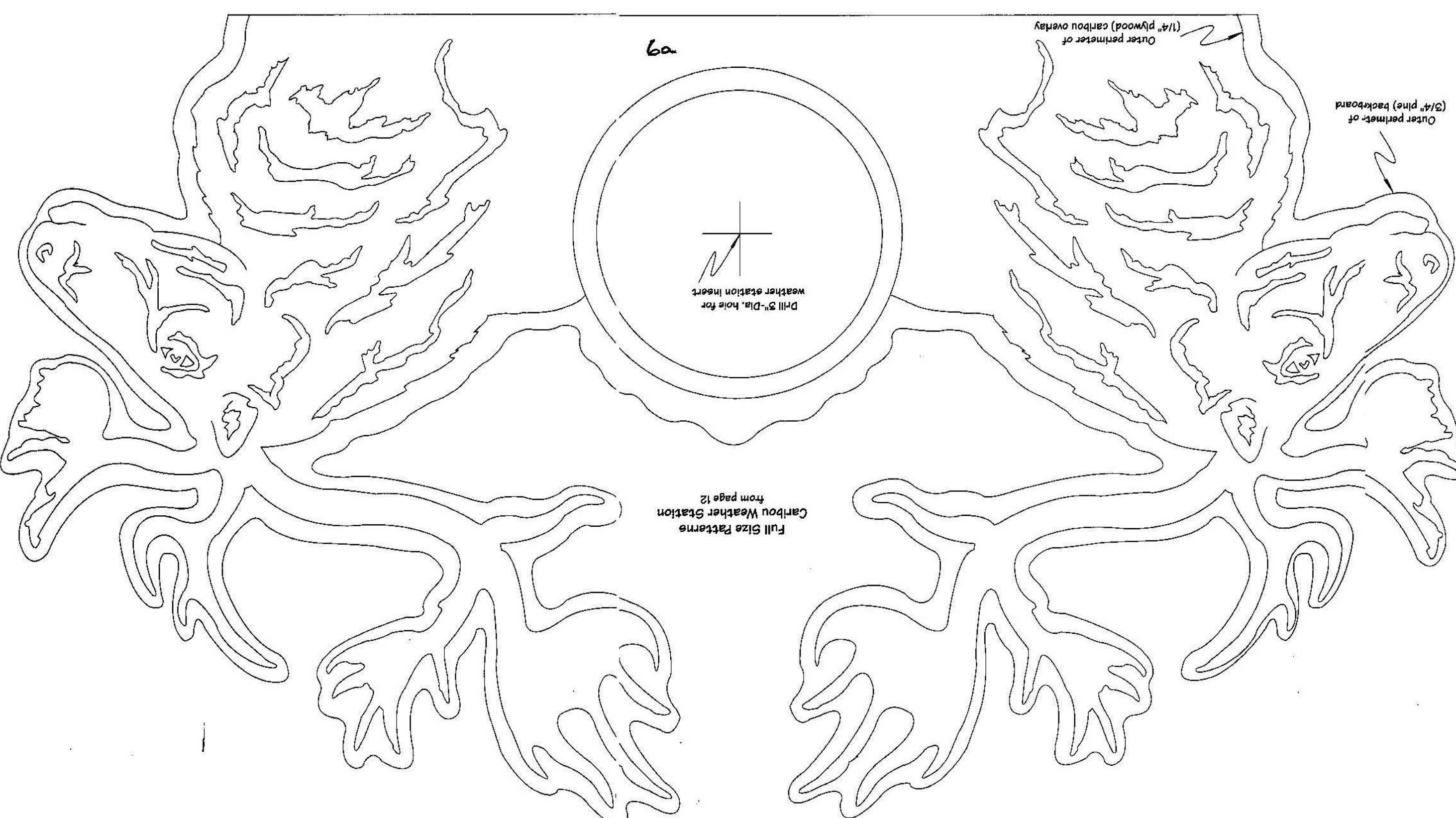
Full Size Patterns
 Corian® Trivet
 from page 61



Full Size Pattern
 Fire-Breathing Dragon
 from page 6

5a

6a

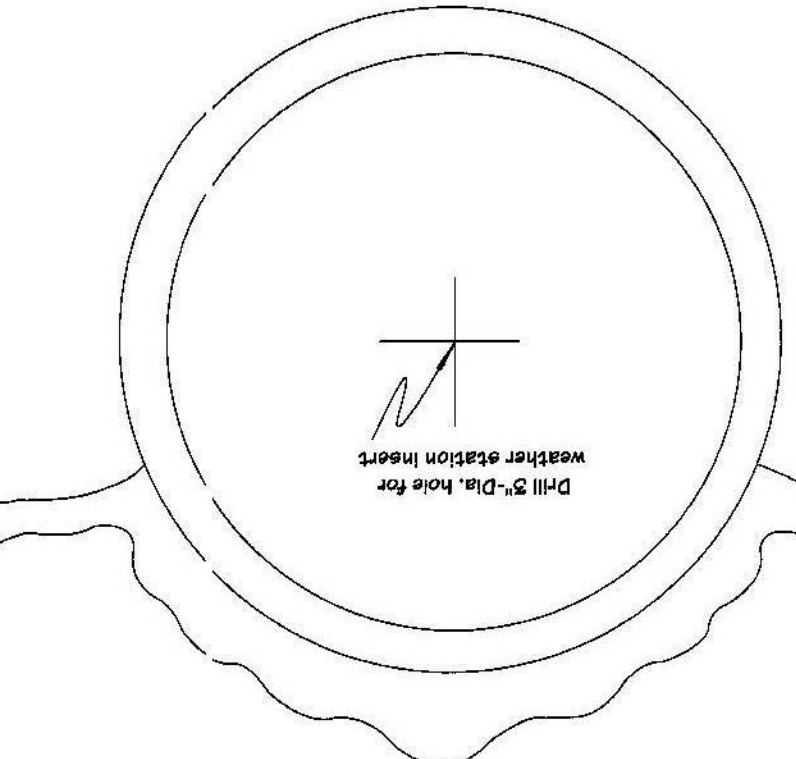


Full Size Patterns
 Caribou Weather Station
 from page 12

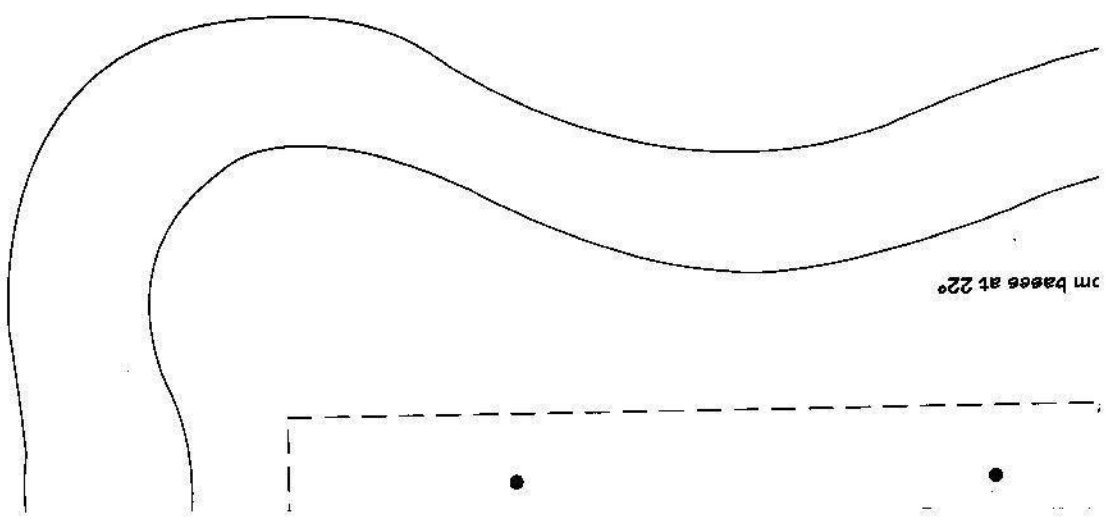
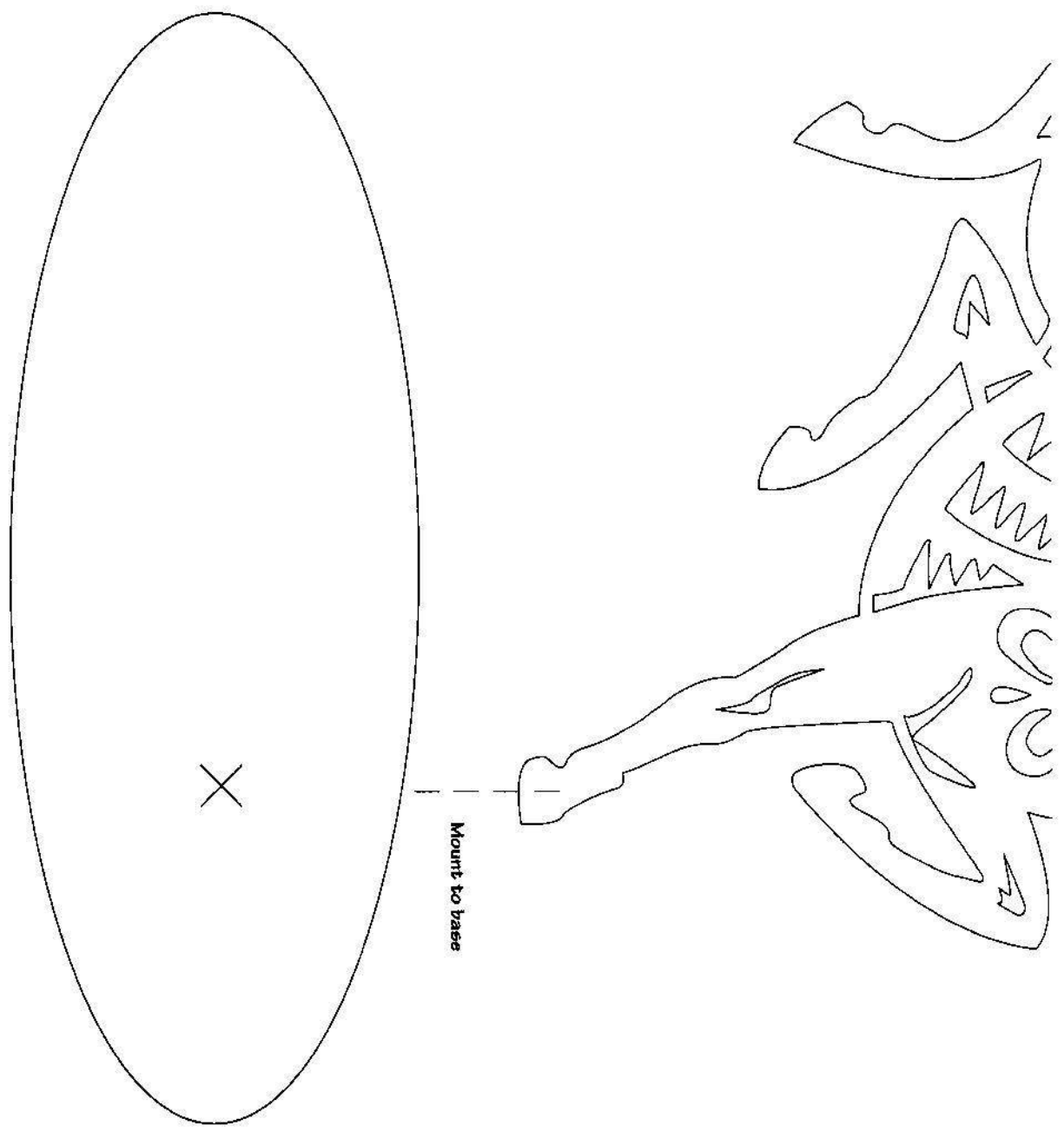
Drill 3"-Dia. hole for
 weather station insert

Outer perimeter of
 (1/4" plywood) caribou overlay

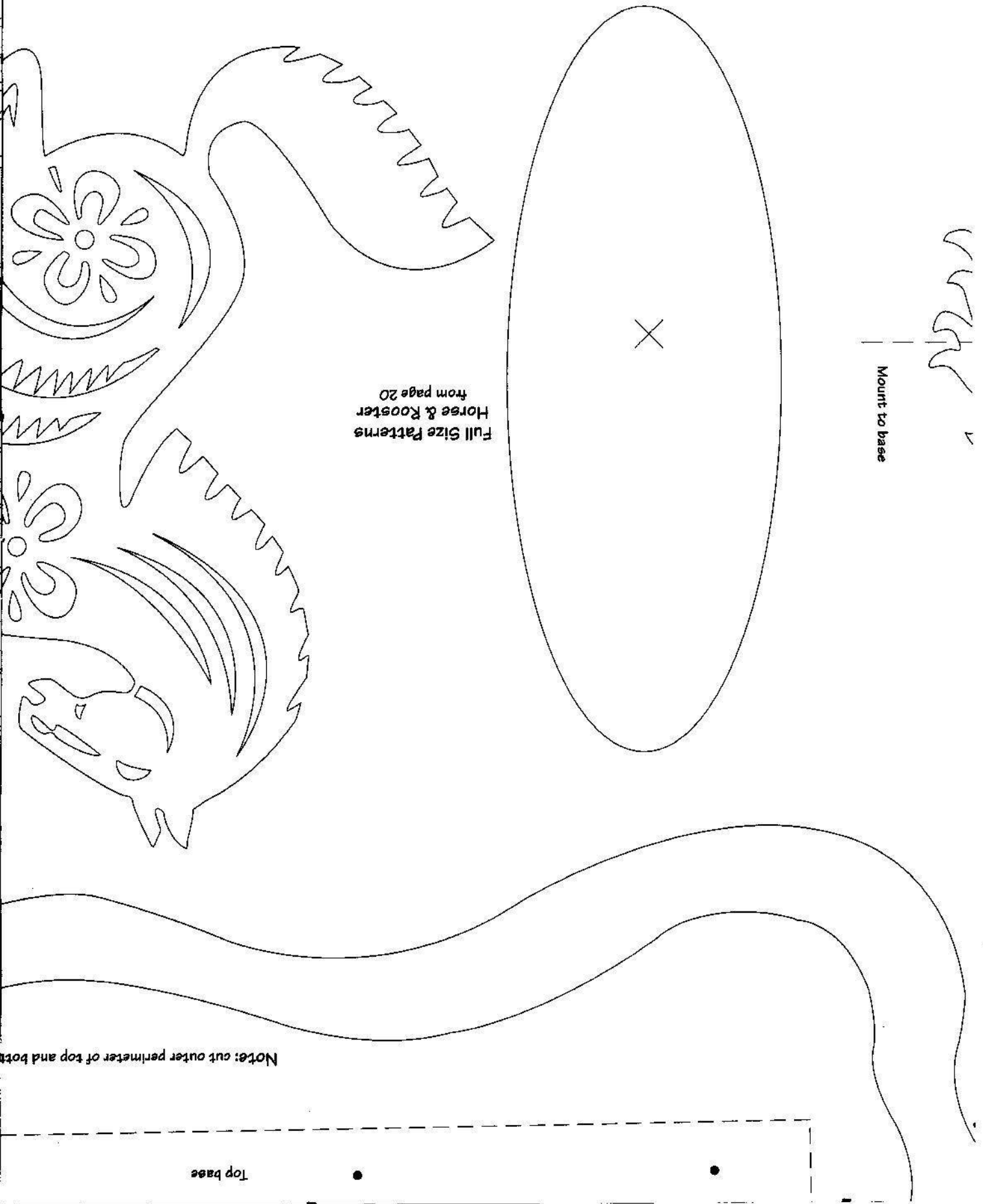
Outer perimeter of
 (5/4" pine) backboard



1a



2a



Full Size Patterns
Horse & Rooster
from page 20

Mount to base

Top base

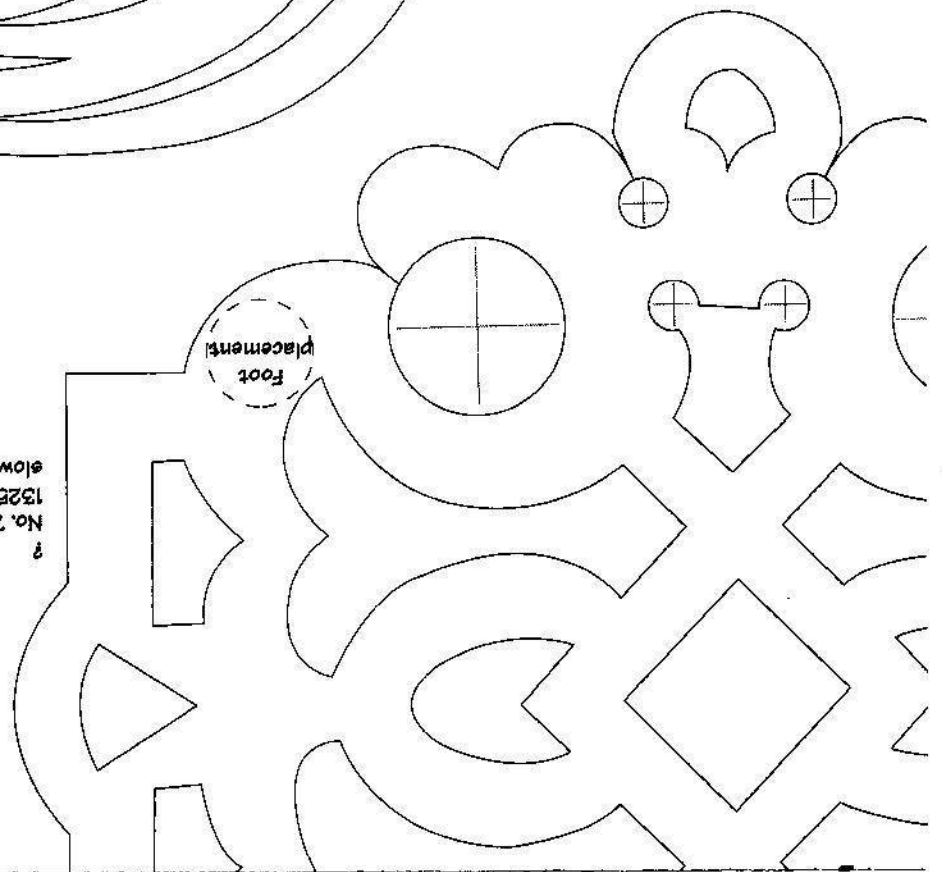
Note: cut outer perimeter of top and bottom

3a



No. 7 PGT blade
1325 speed
slow rate of feed

Foot
placement





FULL SIZE PATTERN SECTION NO. 1 MARCH 2004

Side A

Fire-Breathing Dragon Cougar from page 6
 Caribou Weather Station.....from page 12
 Horse & Rooster..... from page 20
 Corian® Trivet..... from page 61

Side B

The Predator..... from page 28
 Small Mouth Bass..... from page 32
 Potato Head Football Player..... from page 71

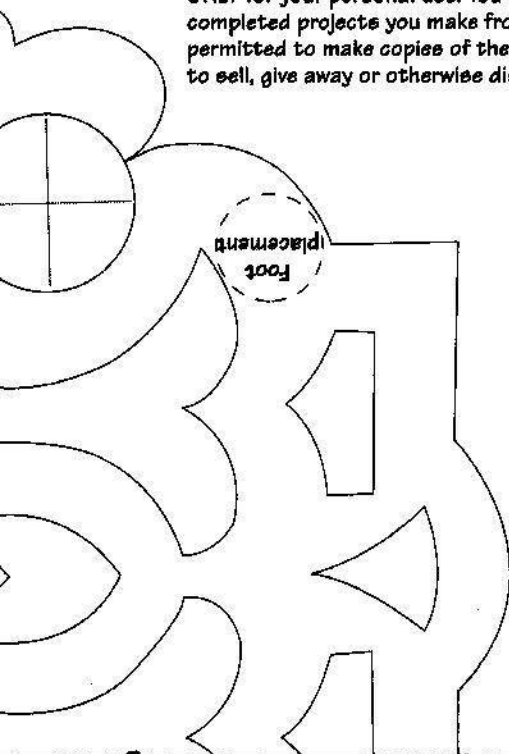
Metric Conversions:

1 inch = 25.4mm = 2.54cm = 0.0254m

Common Measurements:

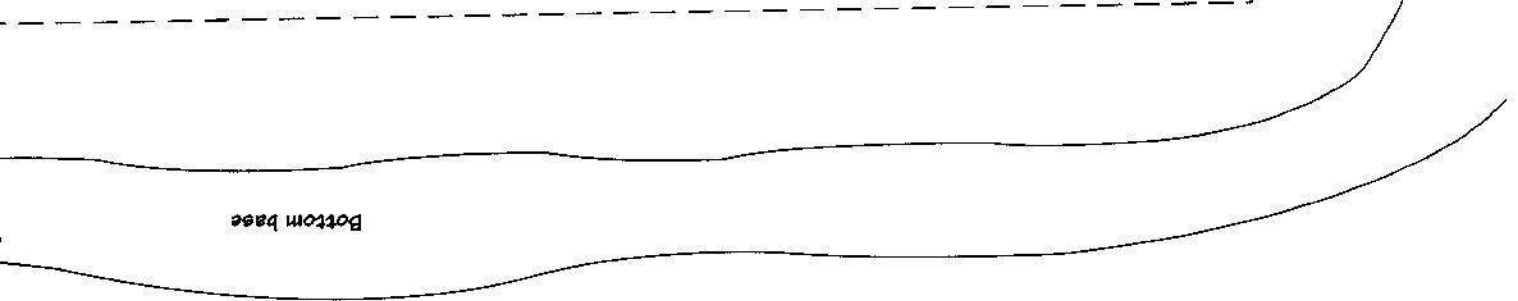
1/16" = 1.59mm	5" = 12.70cm
1/8" = 3.18mm	6" = 15.24cm
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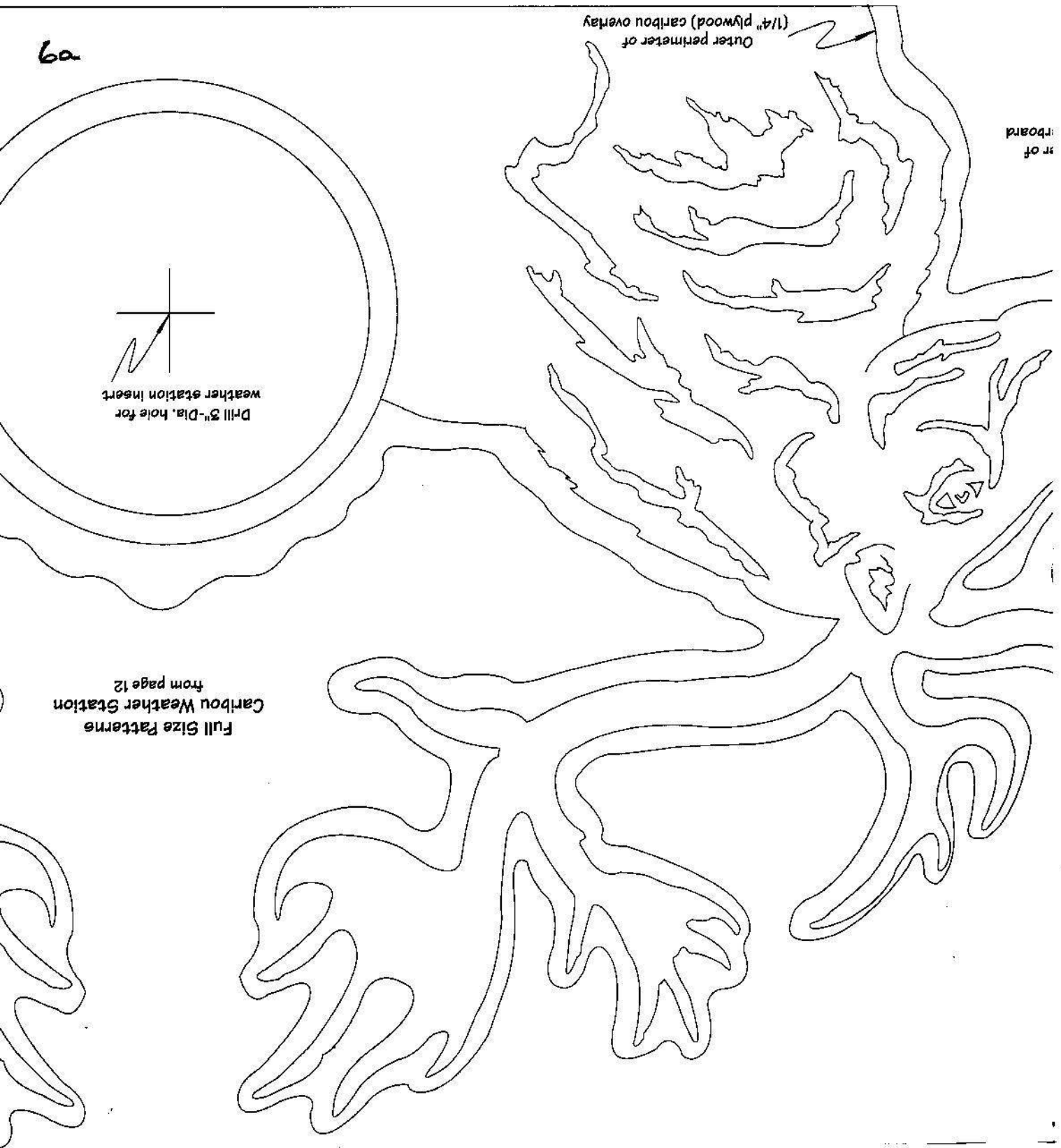


5a





Bottom base



Outer perimeter of (1/4" plywood) caribou overlay

Top of board

Drill 3"-Dia. hole for weather station insert

Full Size Patterns Caribou Weather Station from page 12

6a

7a

Full Size Patterns
Corlan® Trivet
from page 61

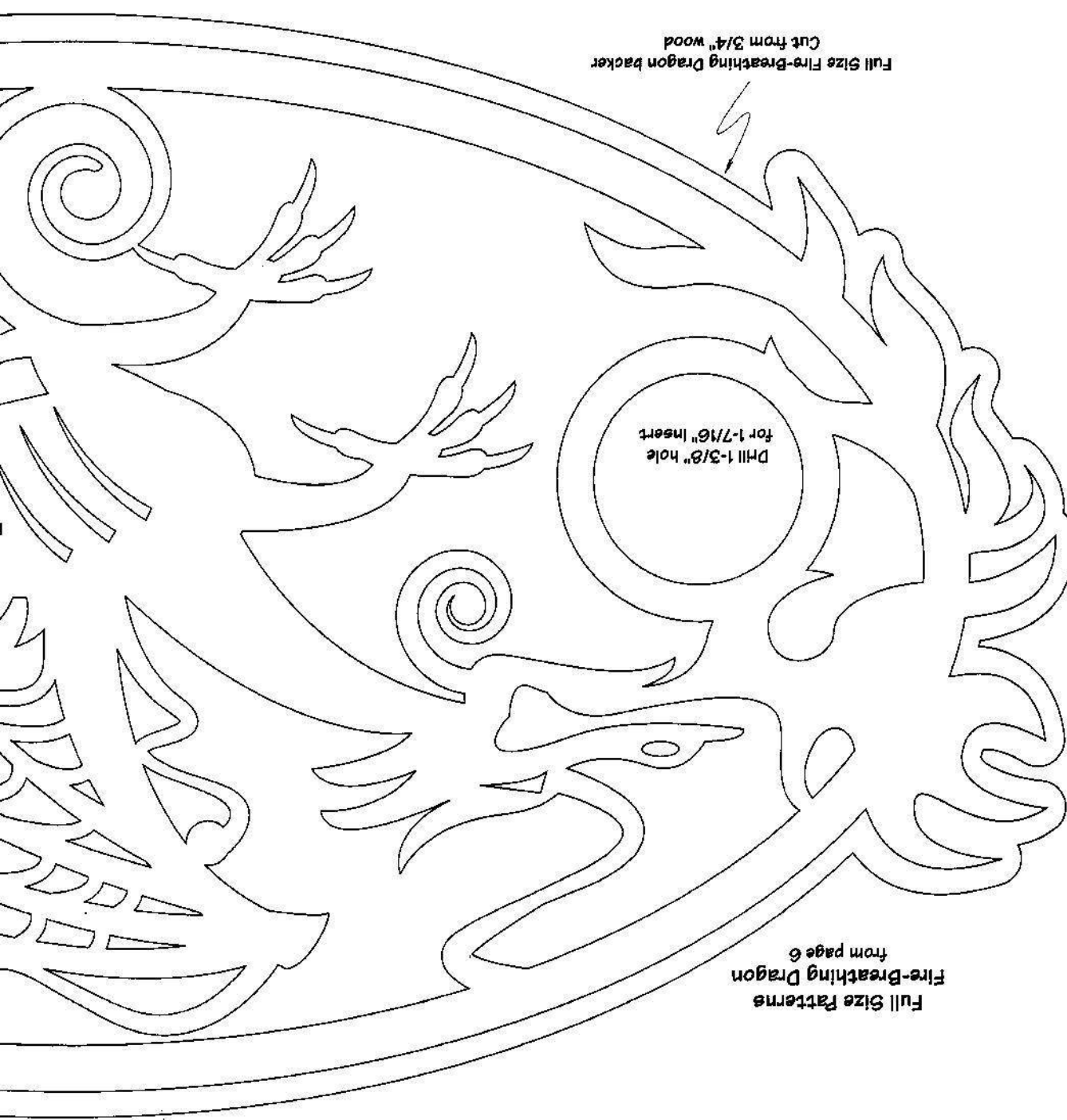
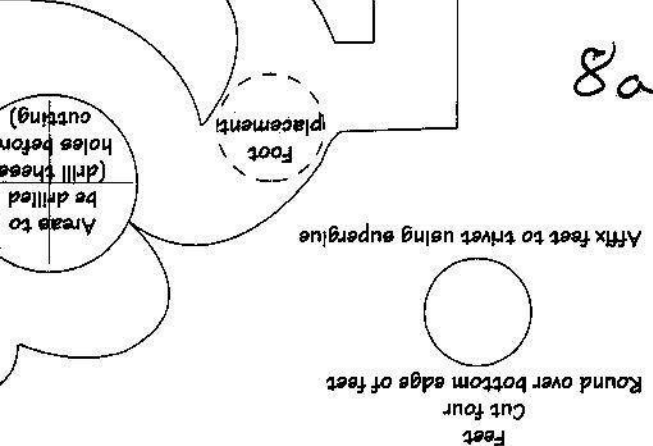
Foot
placement
13/16"

15/16"

Outer perimeter
(3/4" pine) back

Full Size Fire-Breathing Dragon
overlay Cut from 1/8" wood



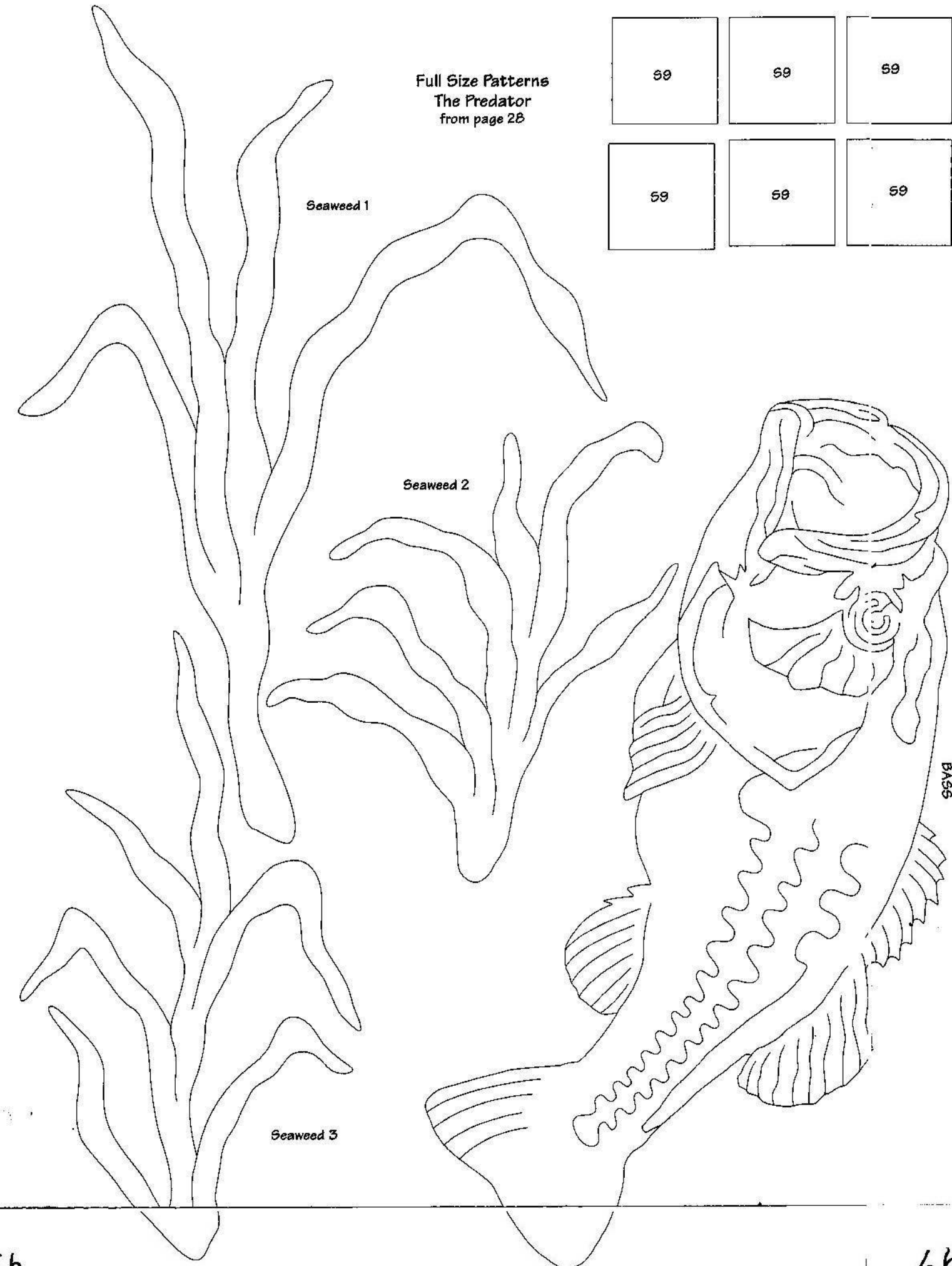


Full Size Fire-Breathing Dragon backer
Cut from 3/4" wood

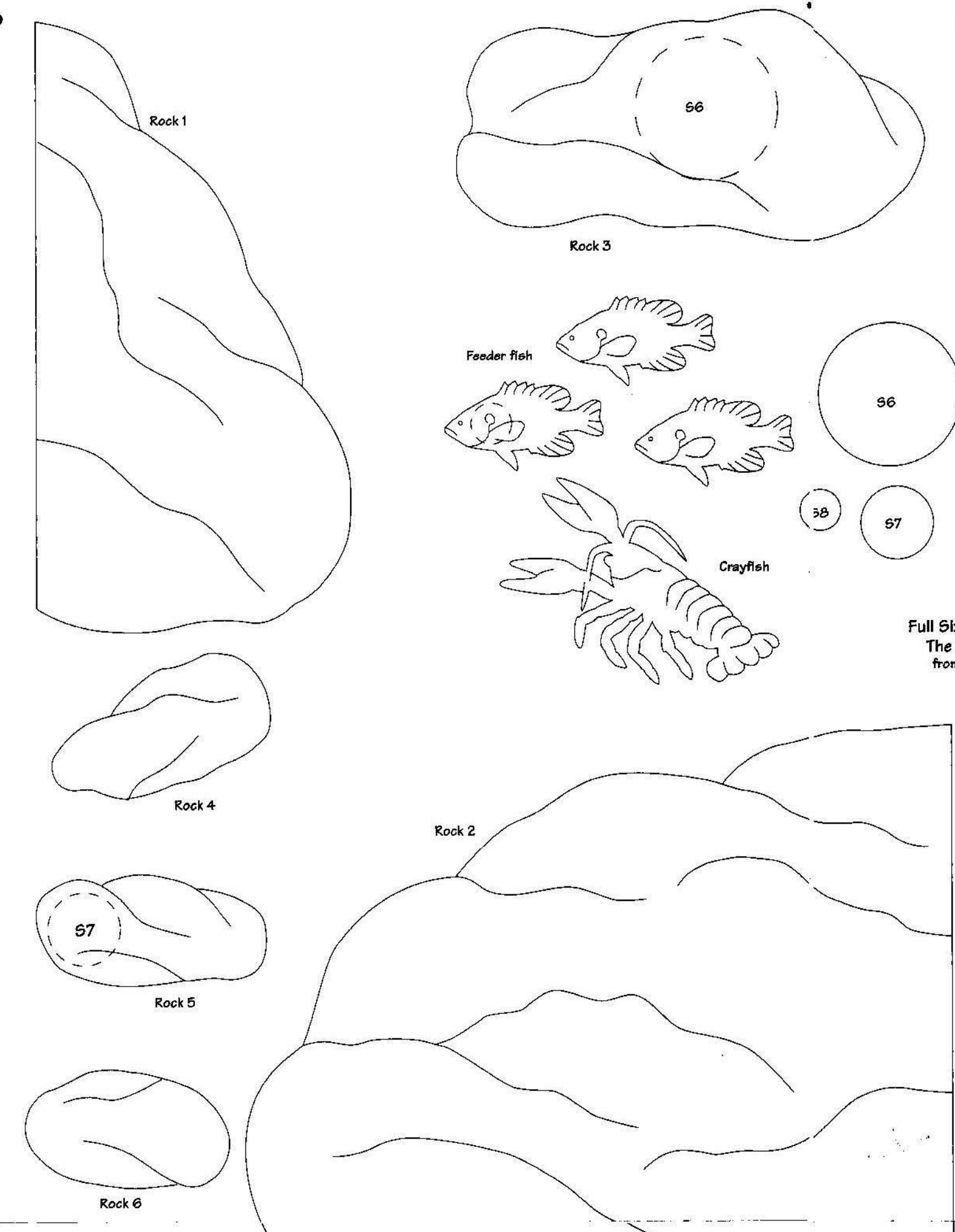
Drill 1-3/8" hole
for 1-7/16" insert

Full Size Patterns
Fire-Breathing Dragon
from page 6

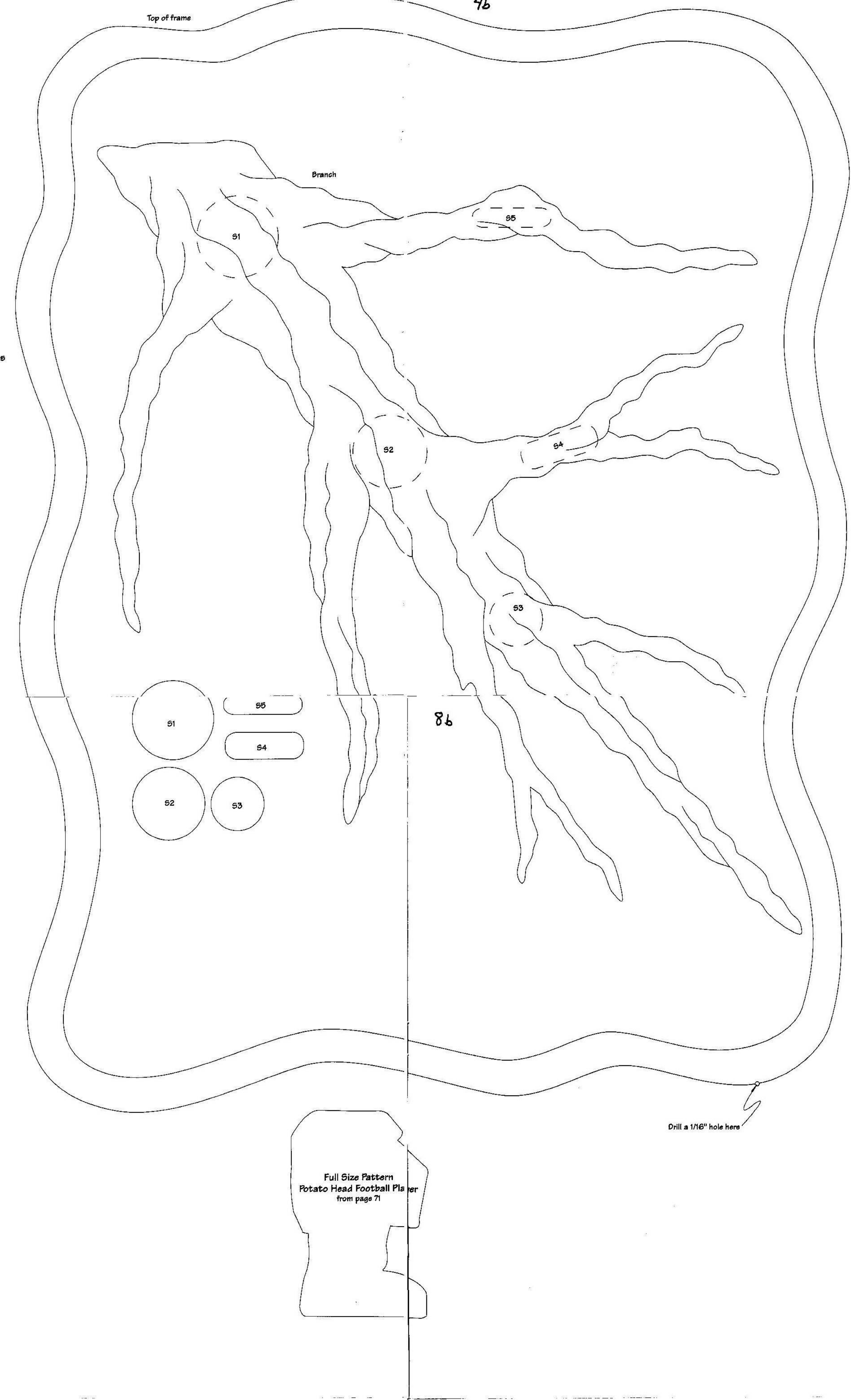
1b



2b



3b

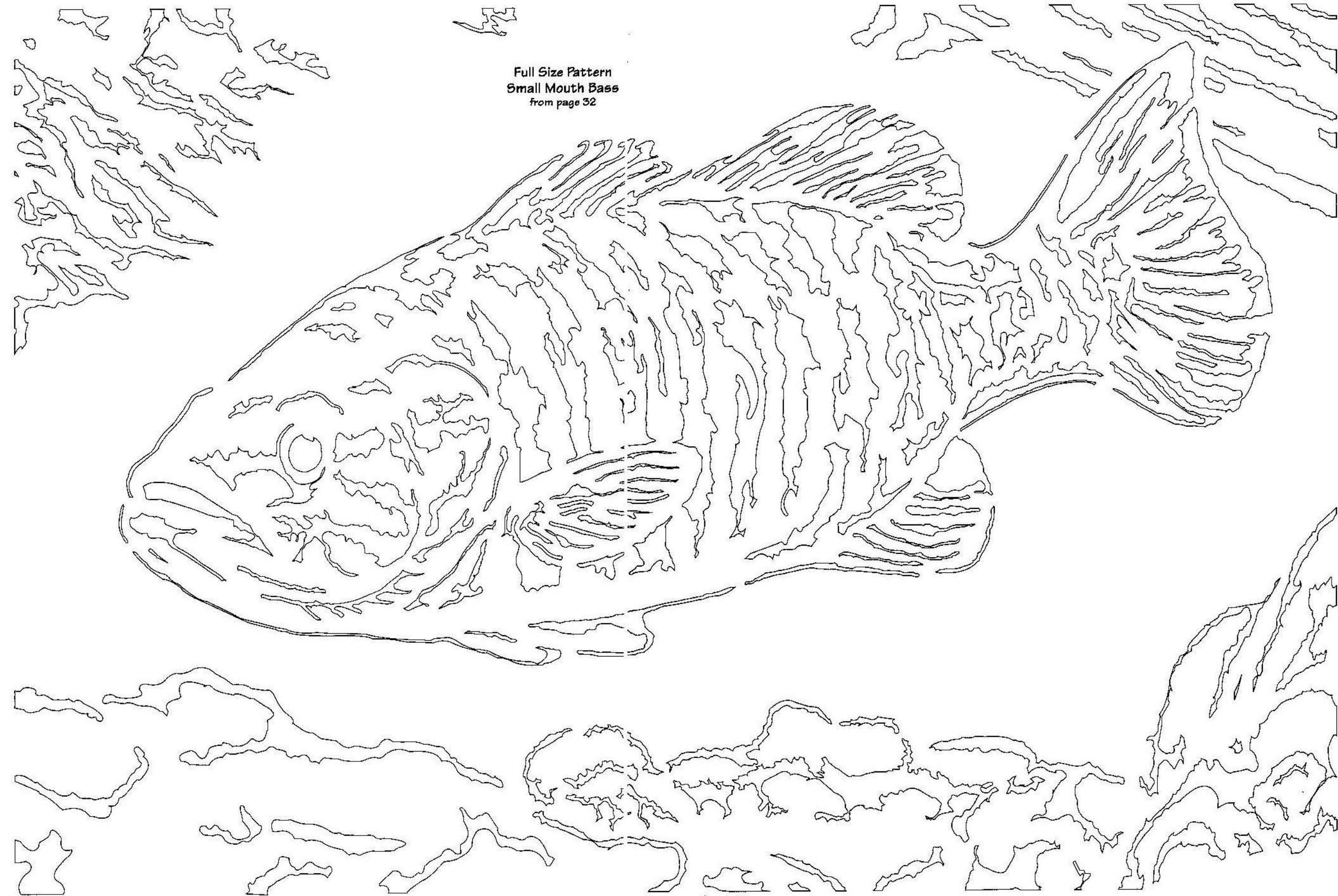


7b

5b

6b

7b



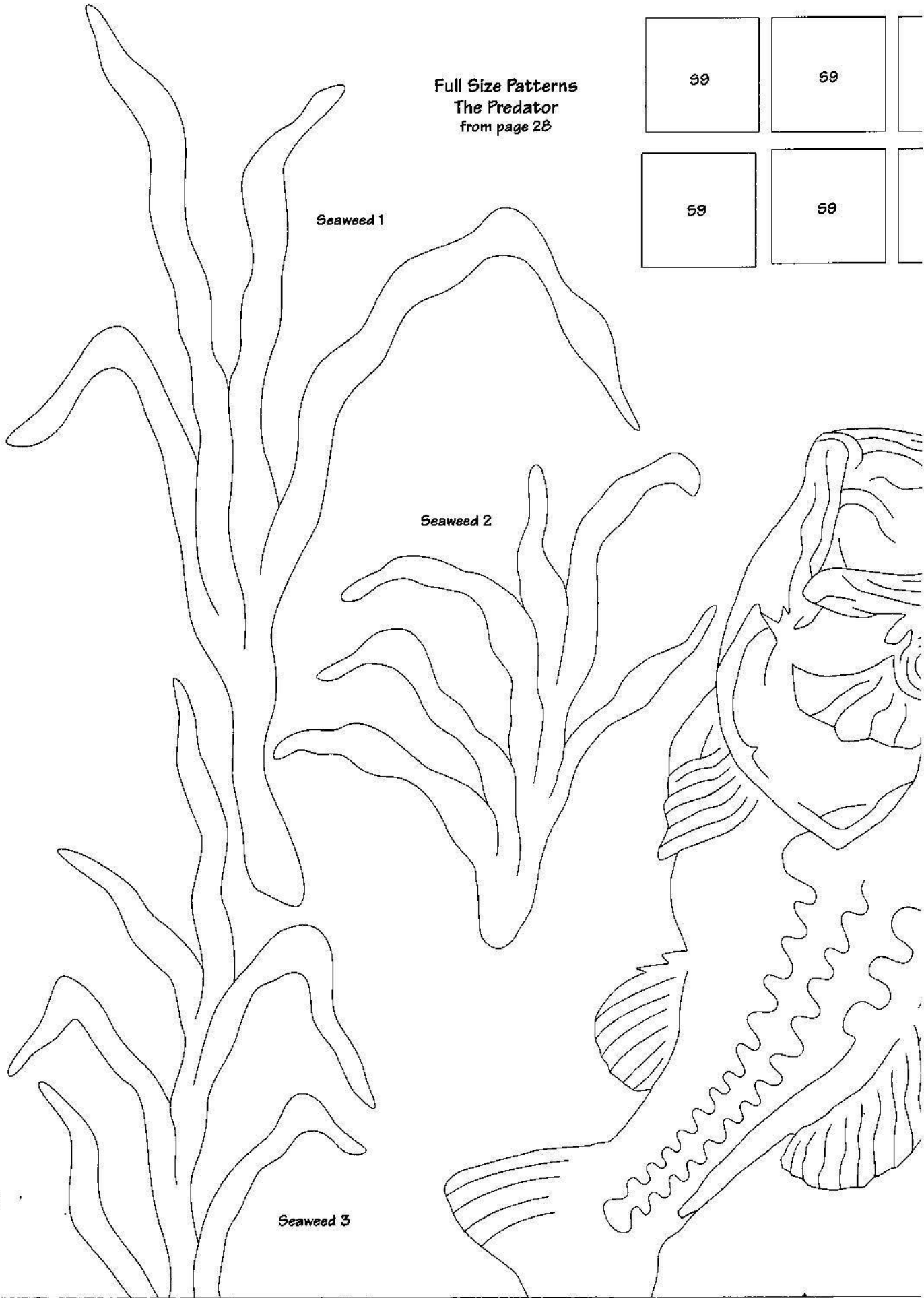
Full Size Patterns
The Predator
from page 28

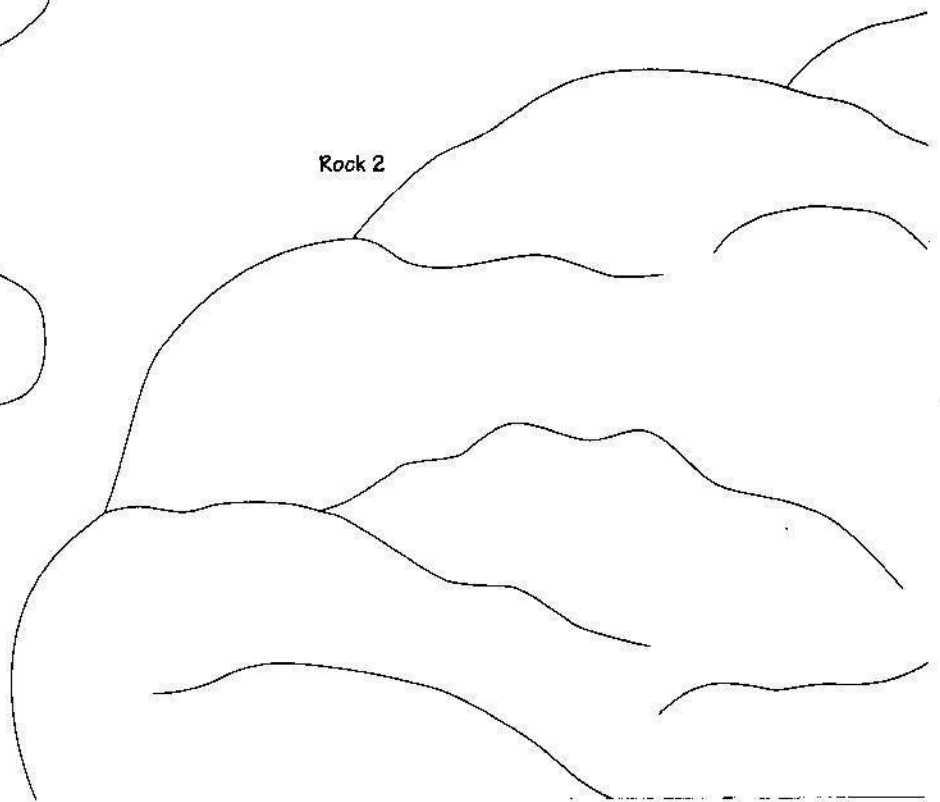
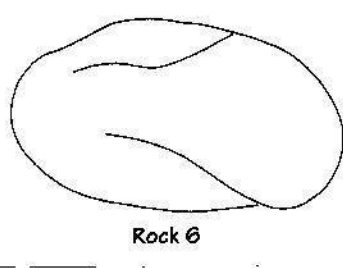
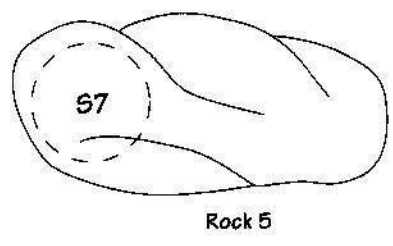
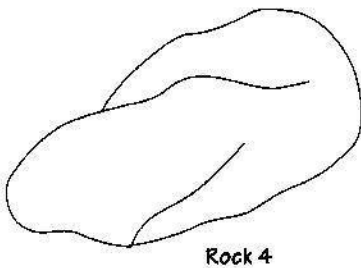
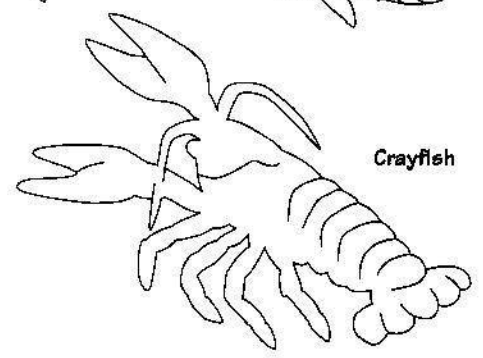
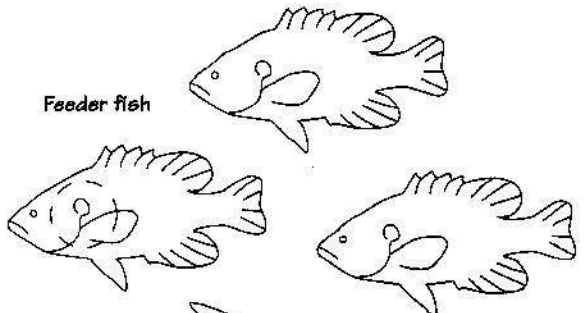
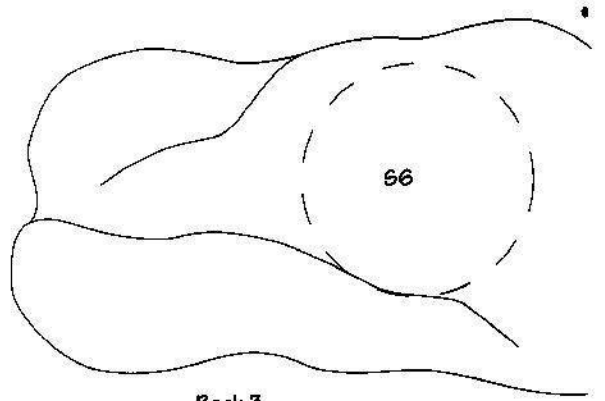
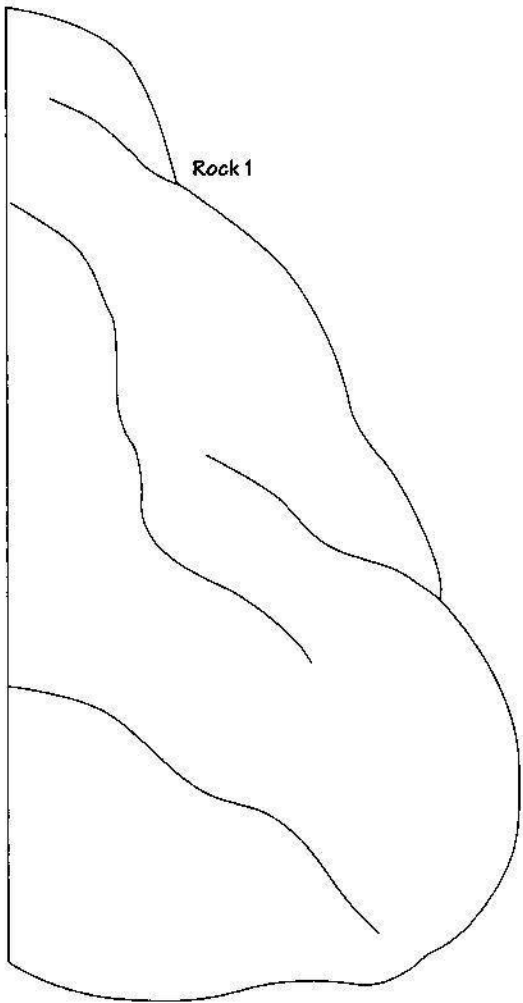
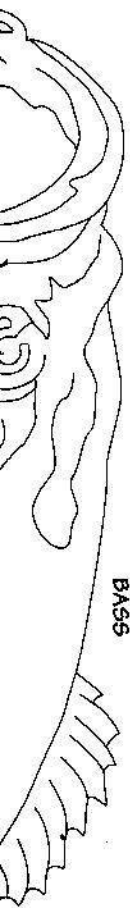
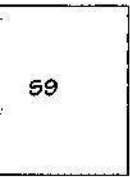
59	59	
59	59	

Seaweed 1

Seaweed 2

Seaweed 3





36

Top of frame

Branch

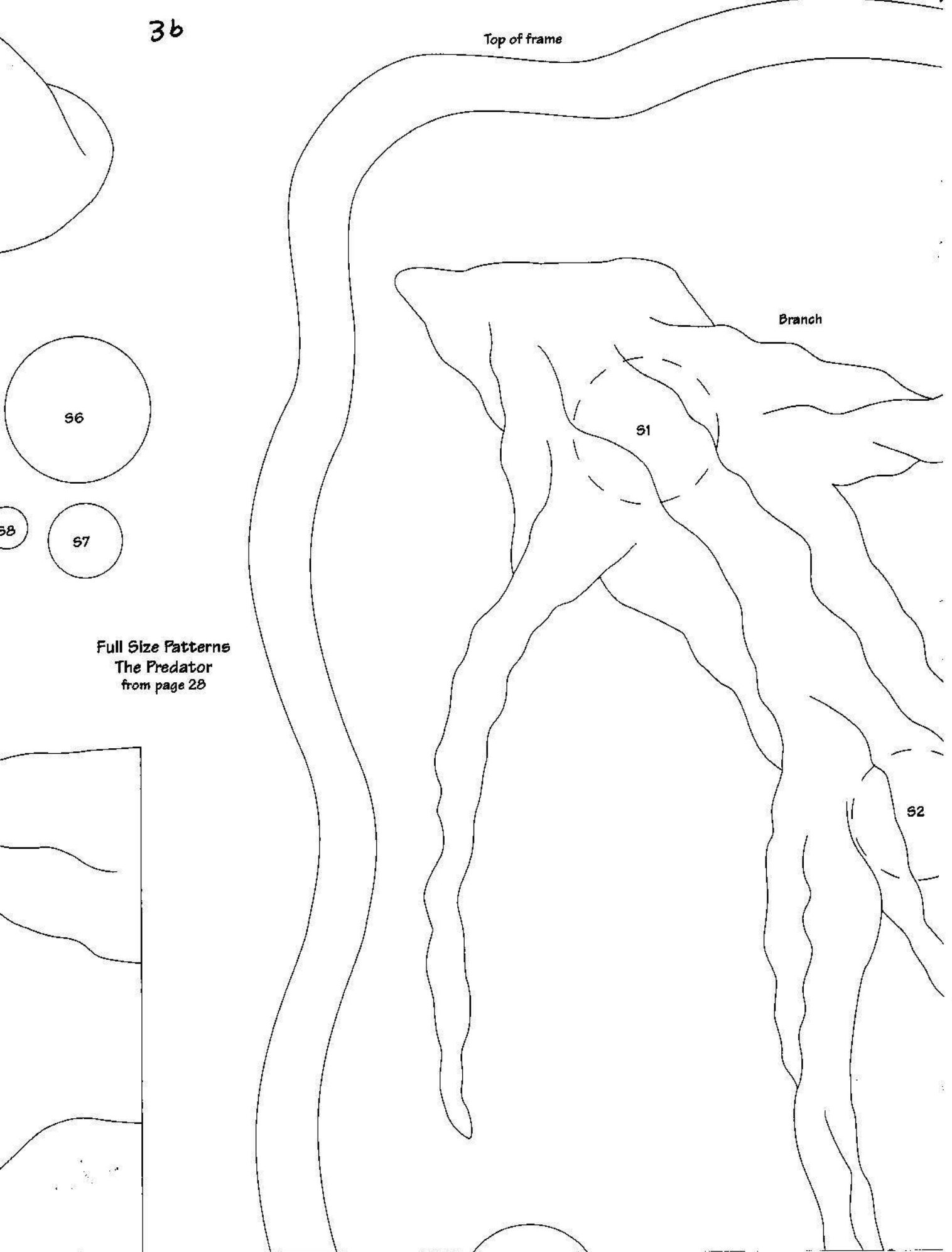
96

91

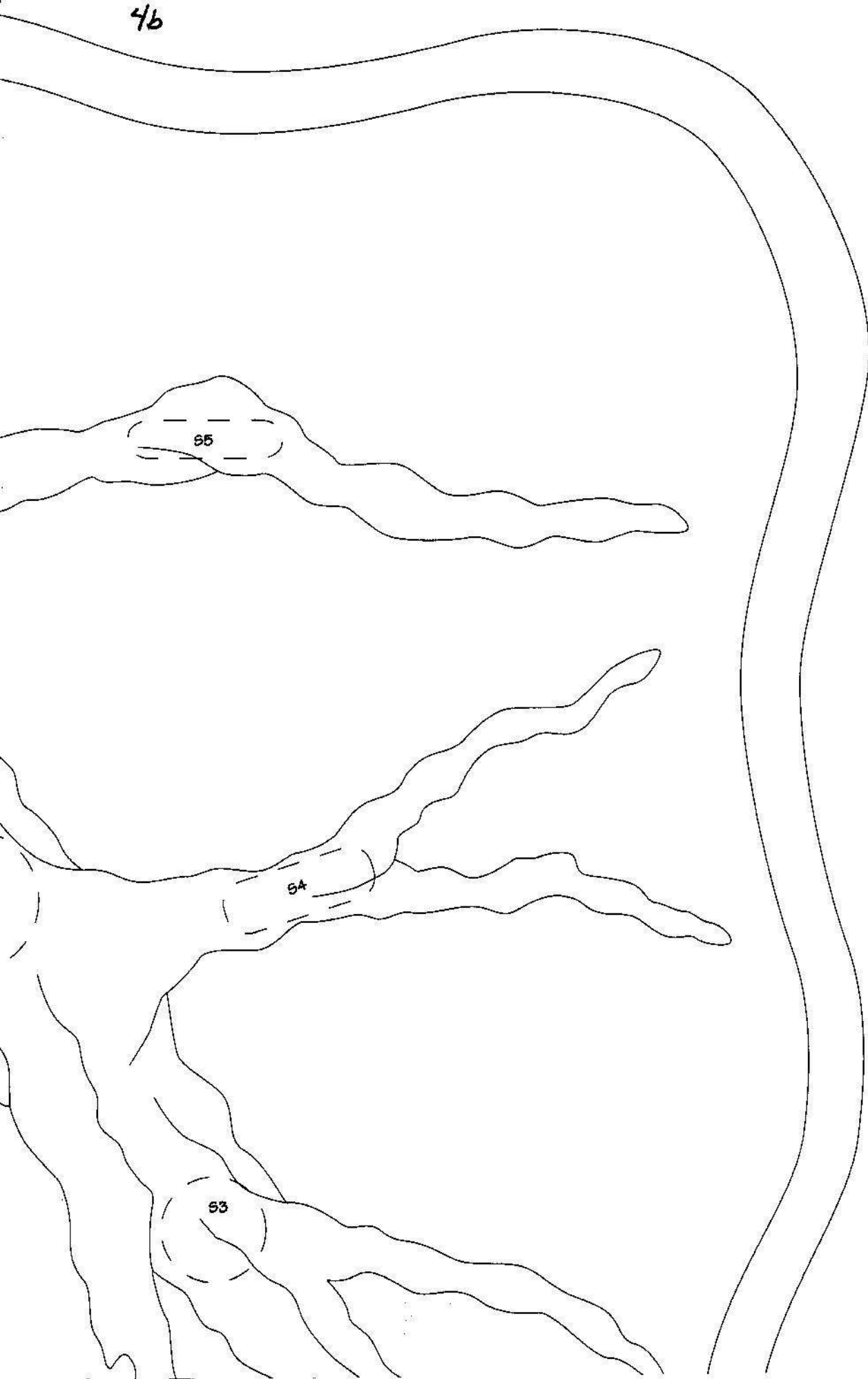
97

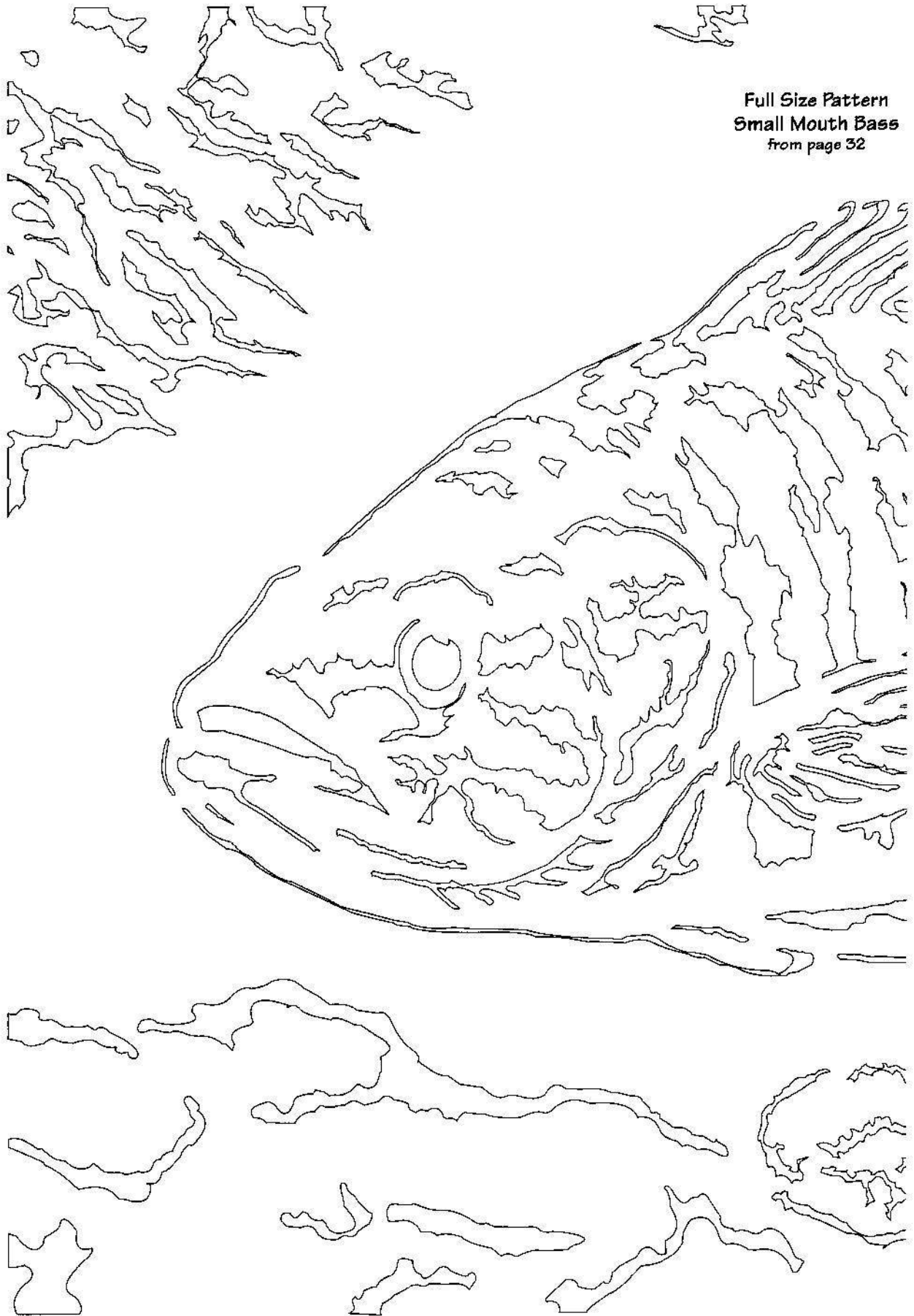
92

Full Size Patterns
The Predator
from page 28



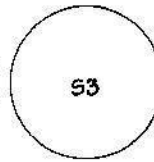
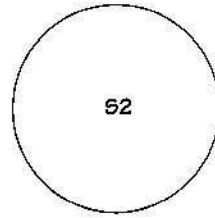
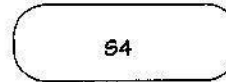
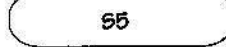
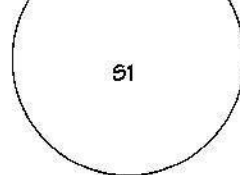
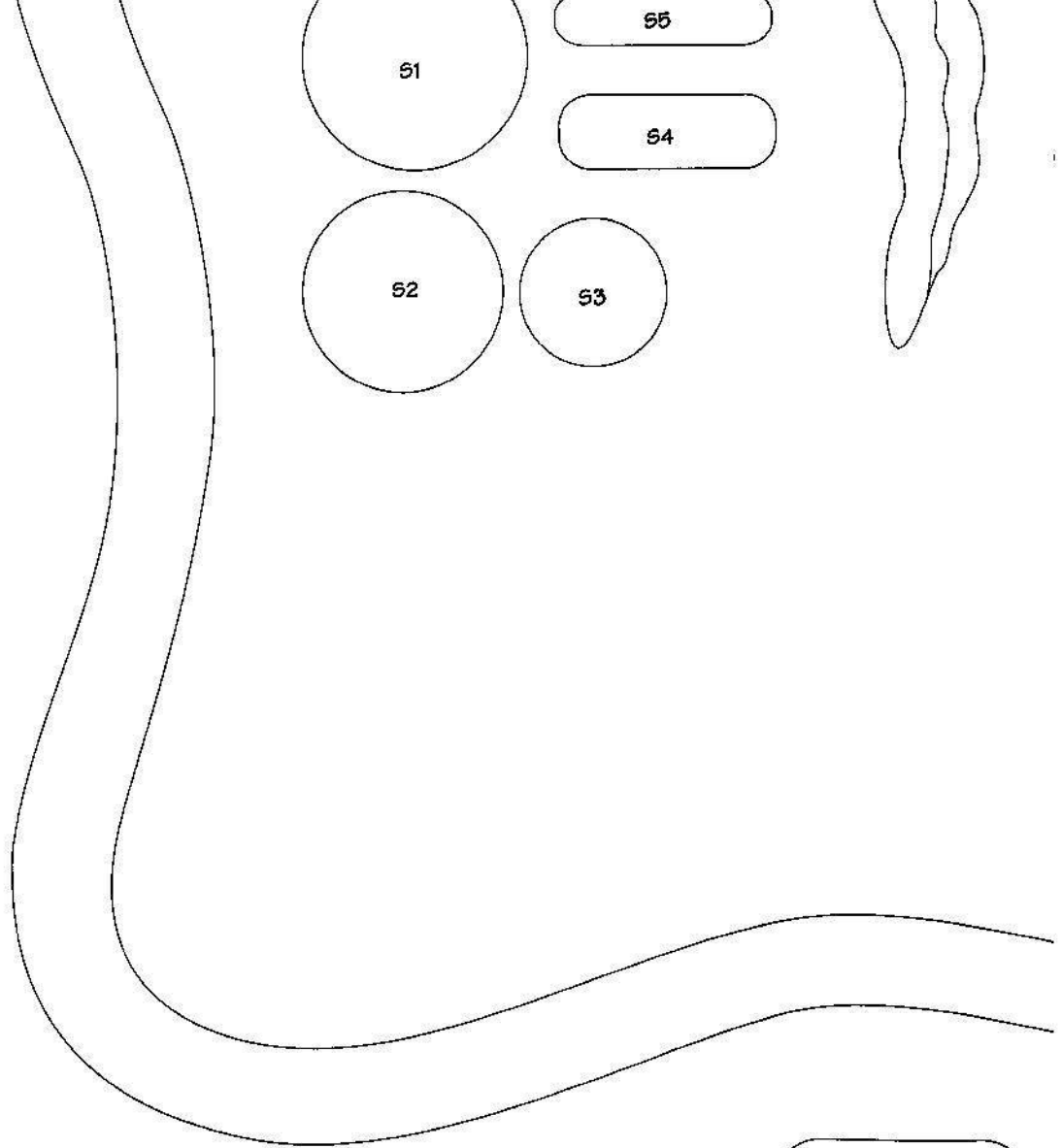
46



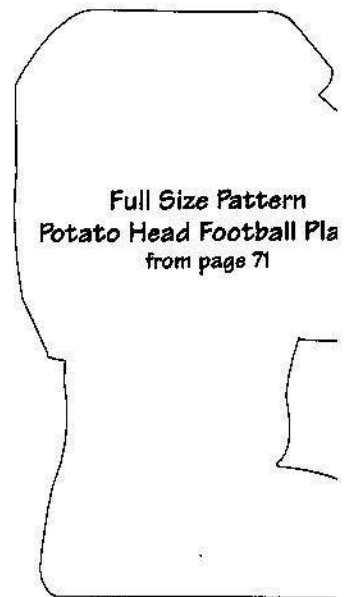


Full Size Pattern
Small Mouth Bass
from page 32

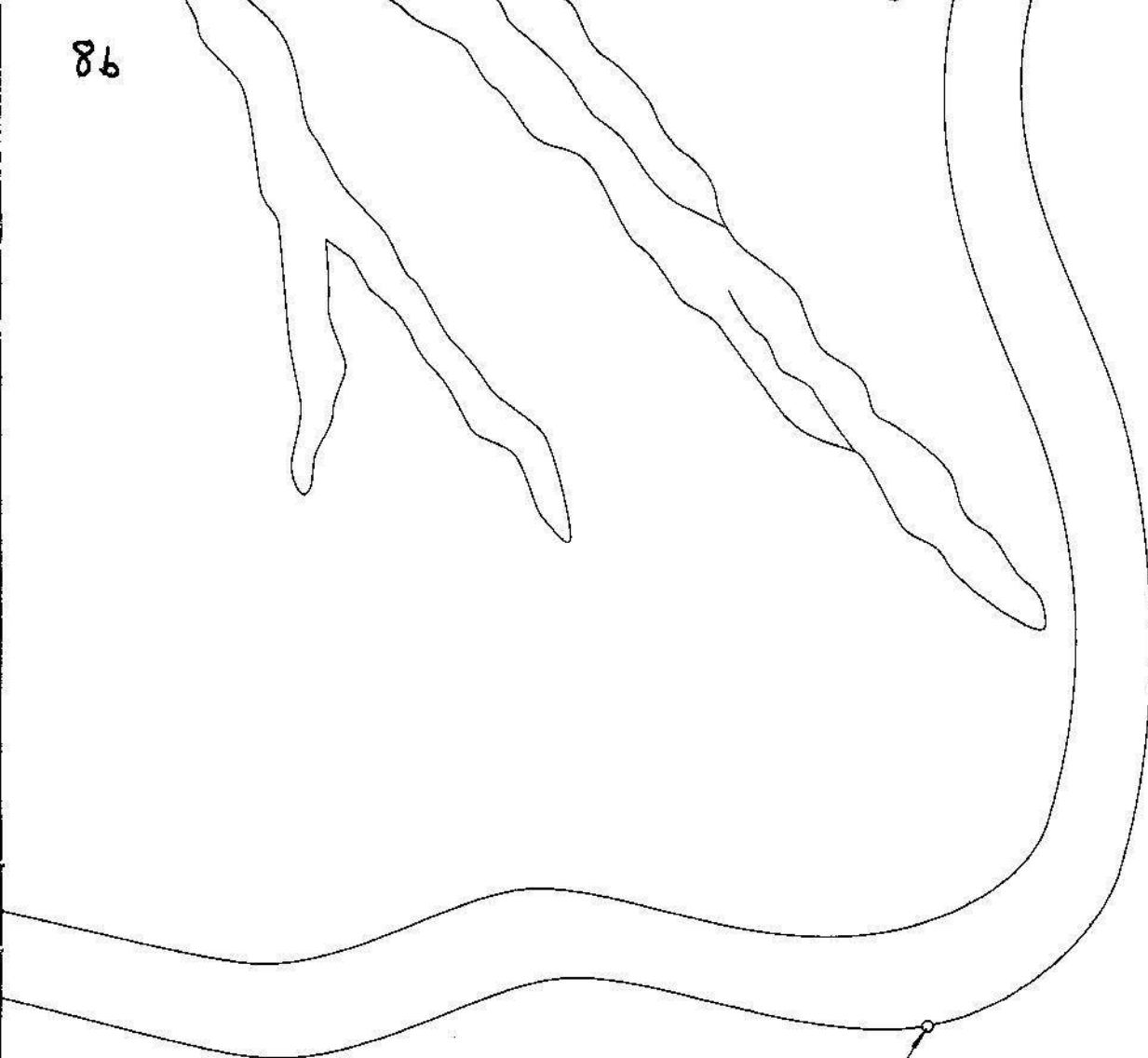




Full Size Pattern
Potato Head Football Pla
from page 71



86



Drill a 1/16" hole here



Side A
Night Stalker.....from page 34
Frames for Good Memories.....from page 48
Side B
Basketweave Jewelry Box.....from page 52
Mammoth.....from page 62
Cajun Gator Intarsia.....from page 66

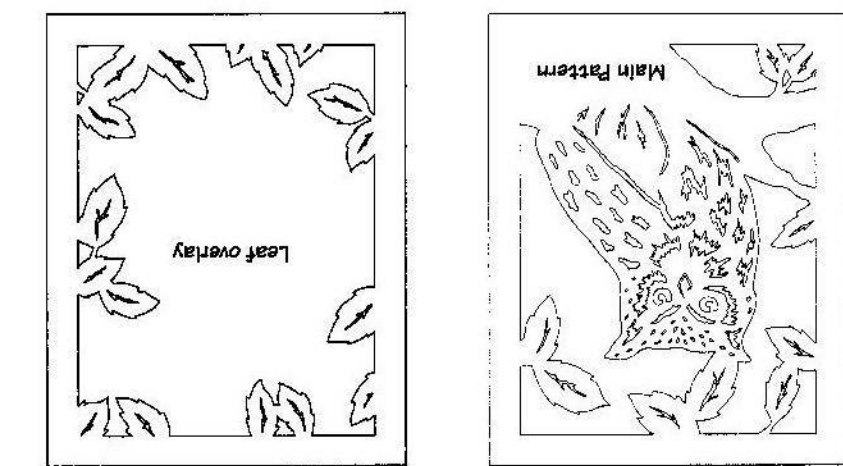
Metric Conversions:

1 Inch = 25.4mm = 2.54cm = 0.0254m

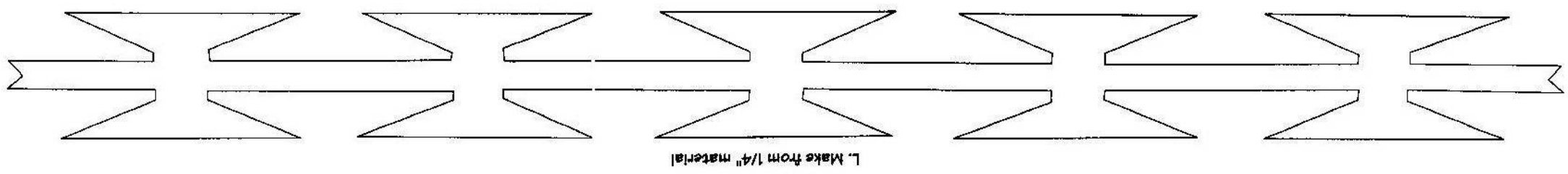
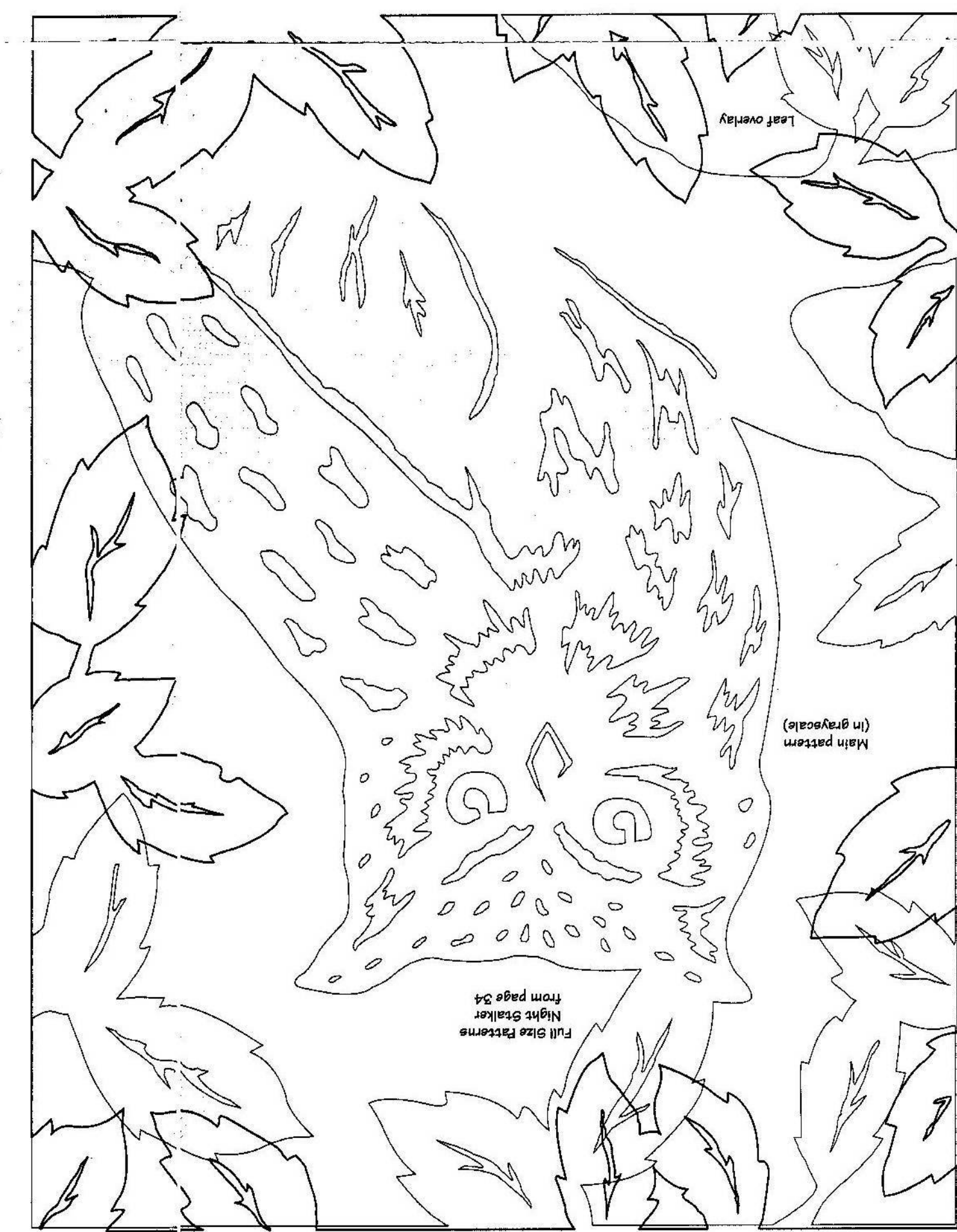
Common Measurements:

1/16" = 1.59mm	5" = 12.70cm
1/8" = 3.18mm	6" = 15.24cm
1/4" = 6.35mm	7" = 17.78cm
3/8" = 9.53mm	8" = 20.32cm
1/2" = 12.70mm	9" = 22.86cm
5/8" = 15.88mm	10" = 25.40cm
3/4" = 19.05mm	11" = 27.94cm
7/8" = 22.23mm	12" = 30.48cm
1" = 25.40mm	24" = 60.96cm
2" = 50.80mm	36" = 91.44cm
3" = 76.20mm	48" = 121.92cm
4" = 101.60mm	60" = 152.40cm

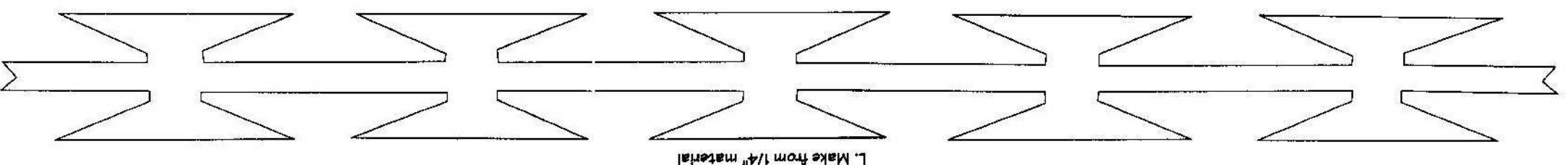
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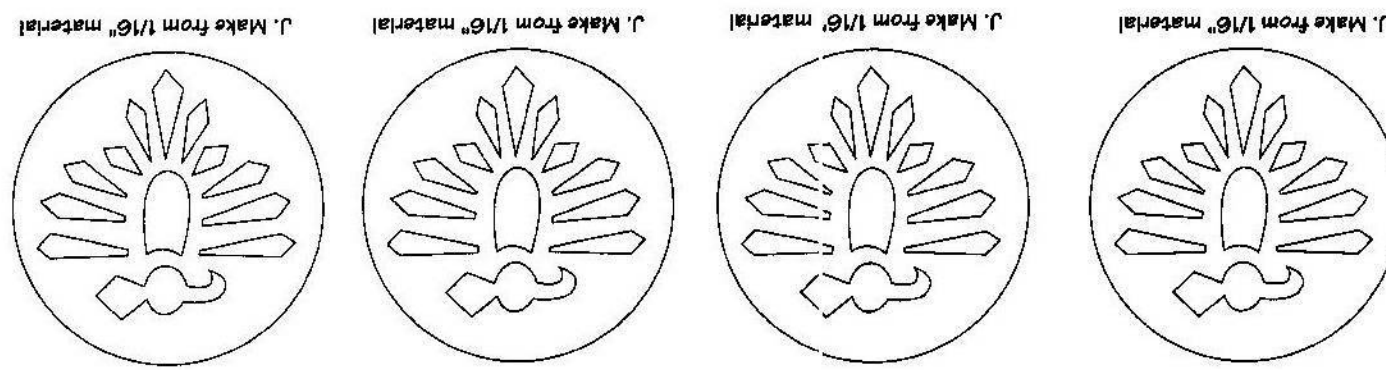
Reduced versions - for reference only



L. Make from 1/4" material



L. Make from 1/4" material

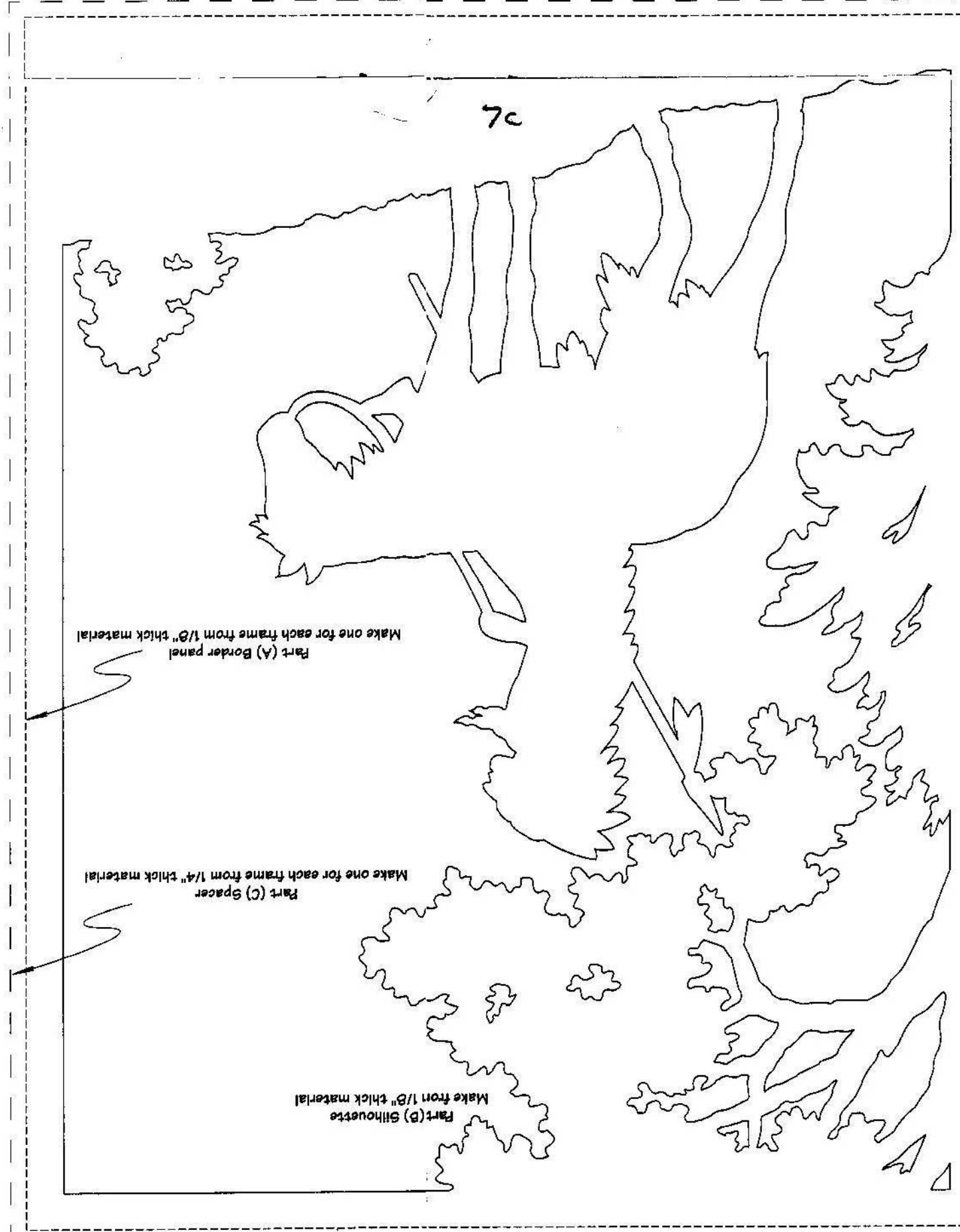


J. Make from 1/16" material

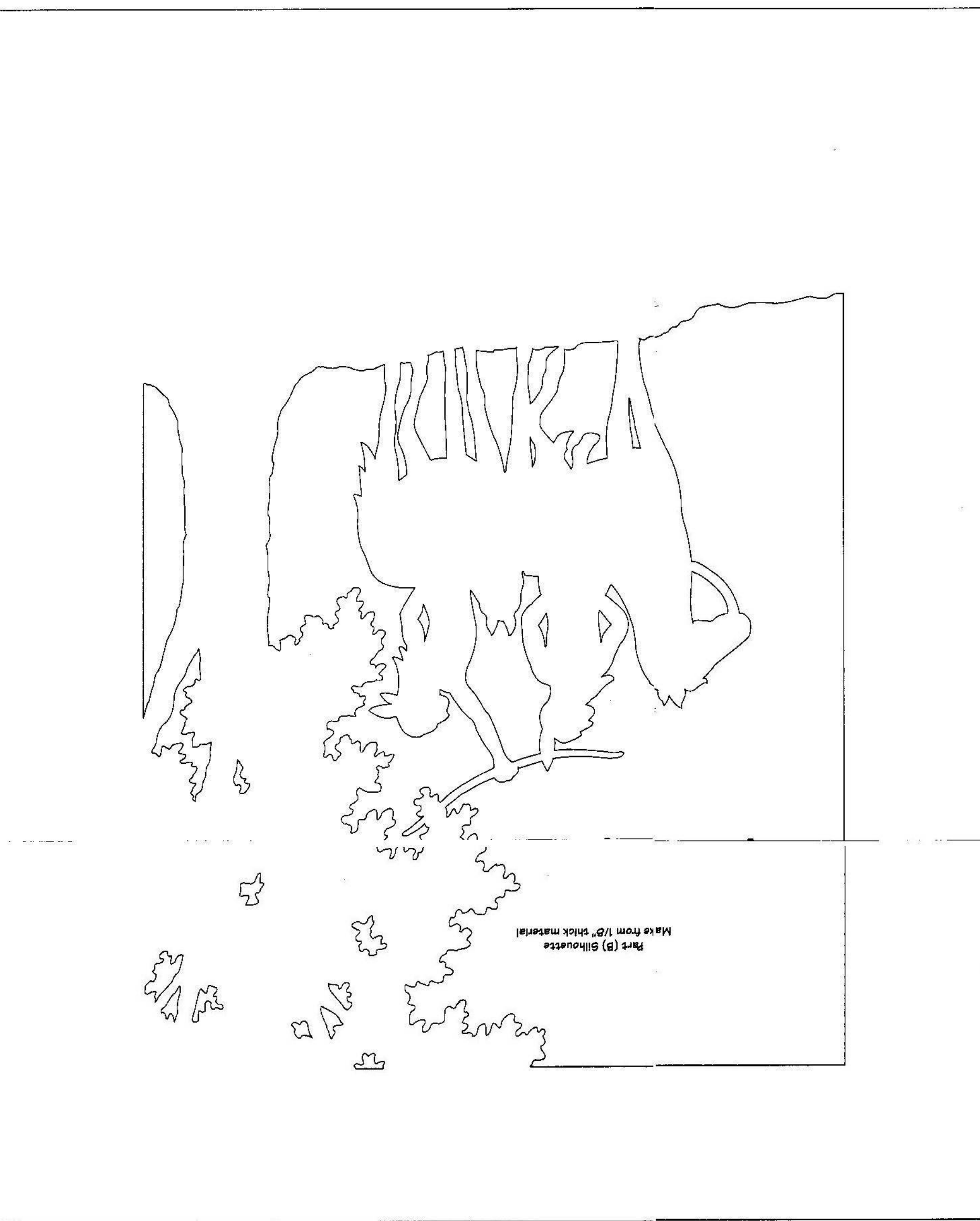
J. Make from 1/16" material

J. Make from 1/16" material

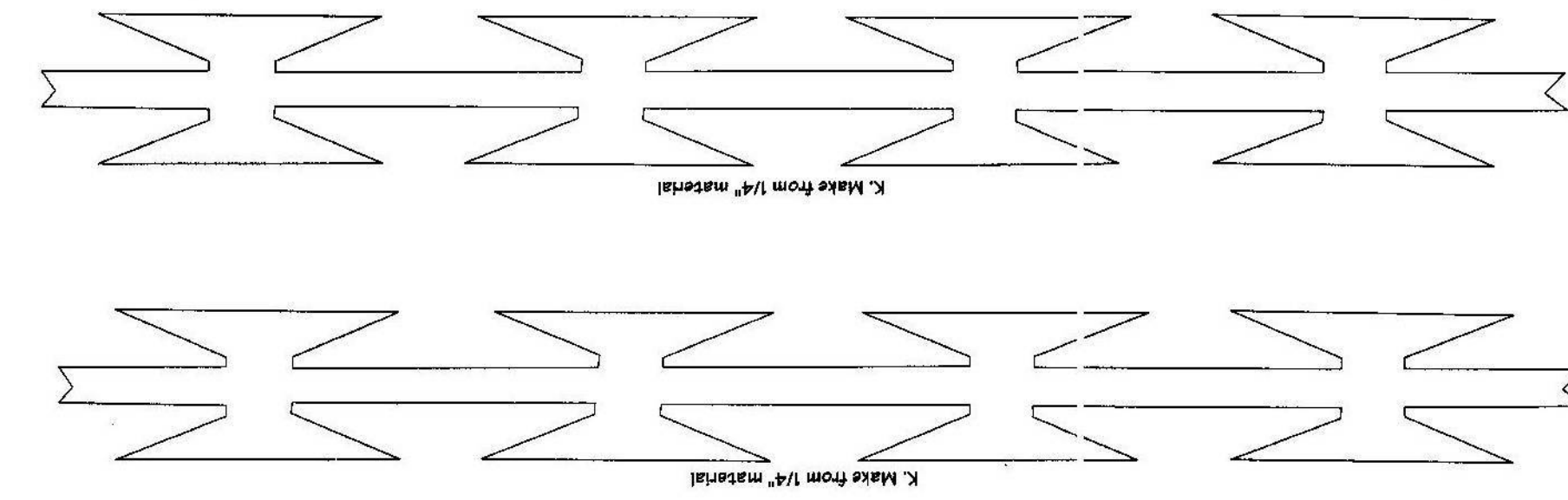
J. Make from 1/16" material



C



C



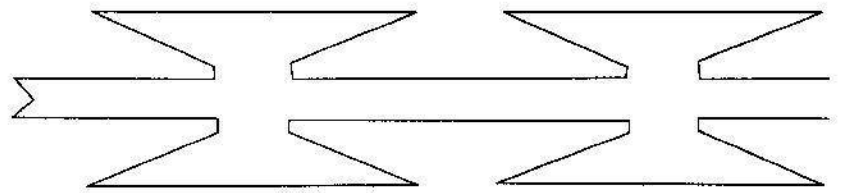
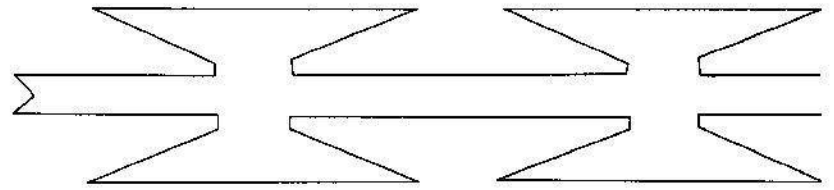
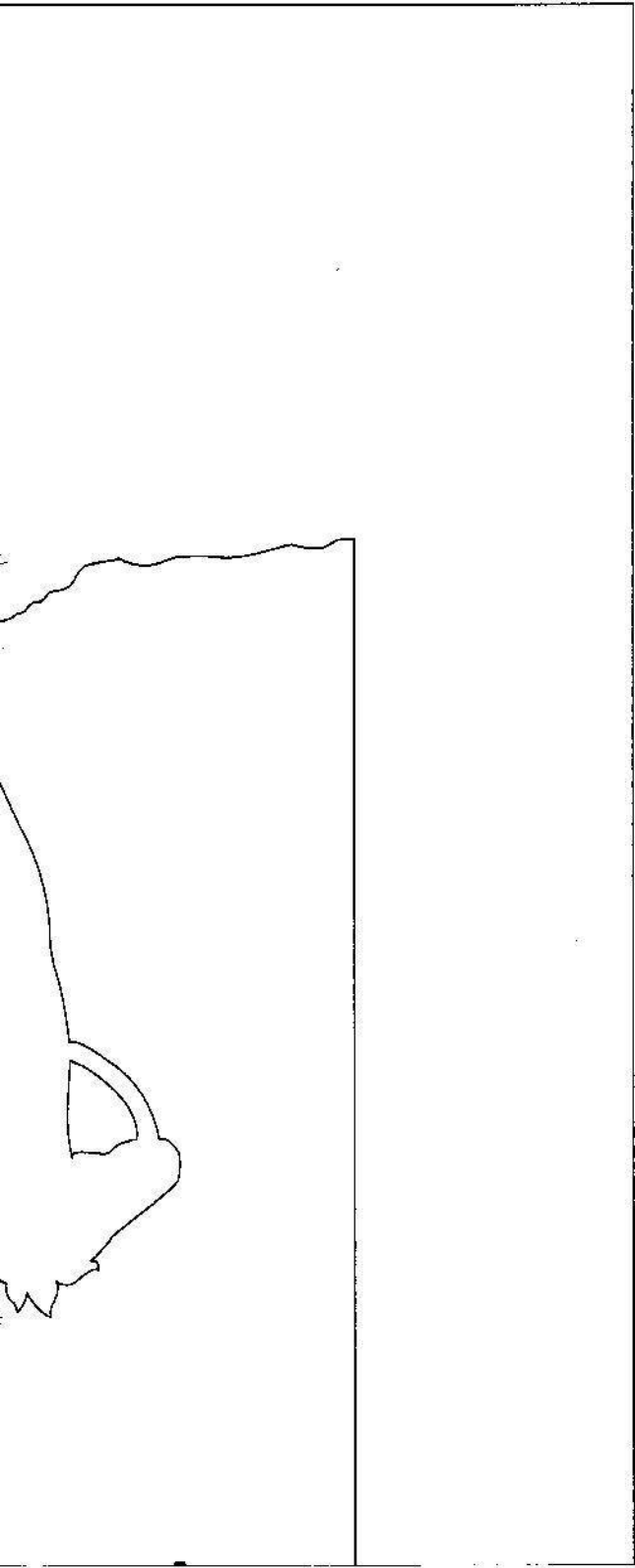
K. Make from 1/4" material

Full Size Patterns
Frames for Good Memories
from page 48

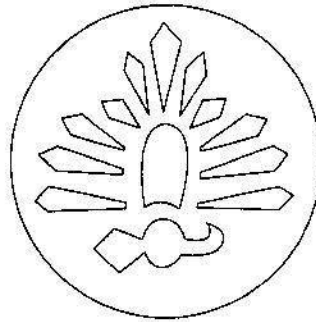
D. Backer
Make from 1/4" thick material

Also, the border panel (A), spacer (C), and backer (D) share the same (10" x 12") outer dimensions.

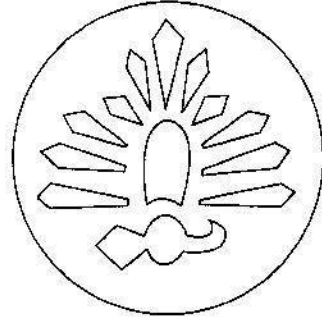




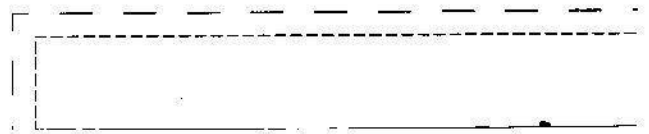
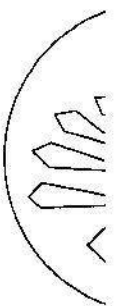
J. Make from 1/16" material

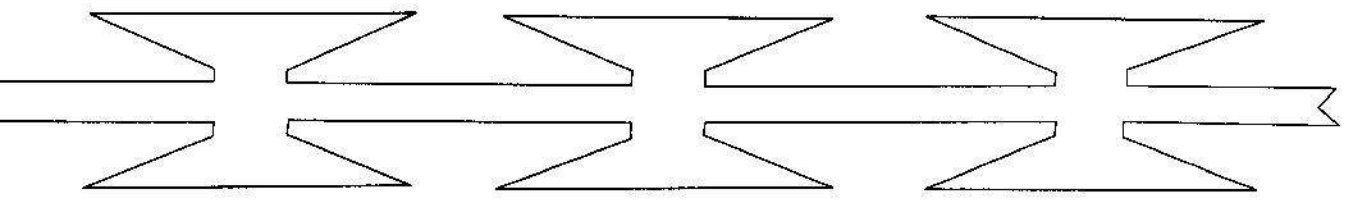


J. Make from 1/16" material

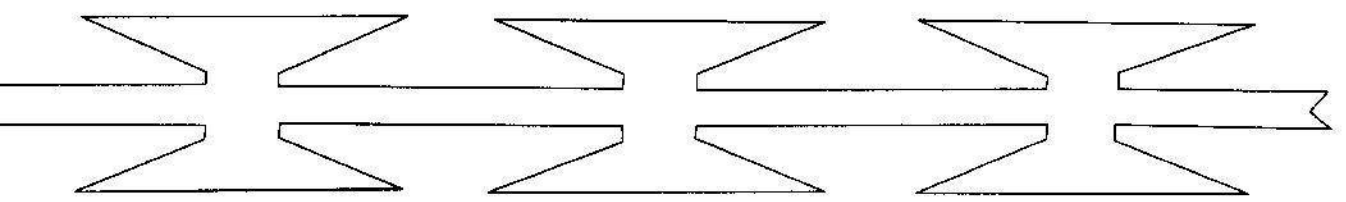


material

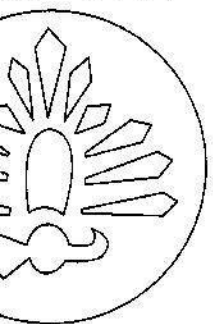




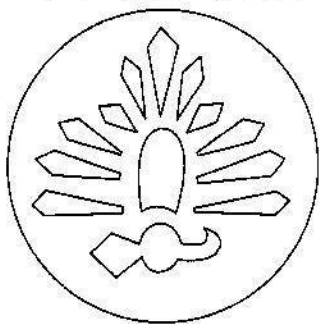
L. Make from 1/4" material



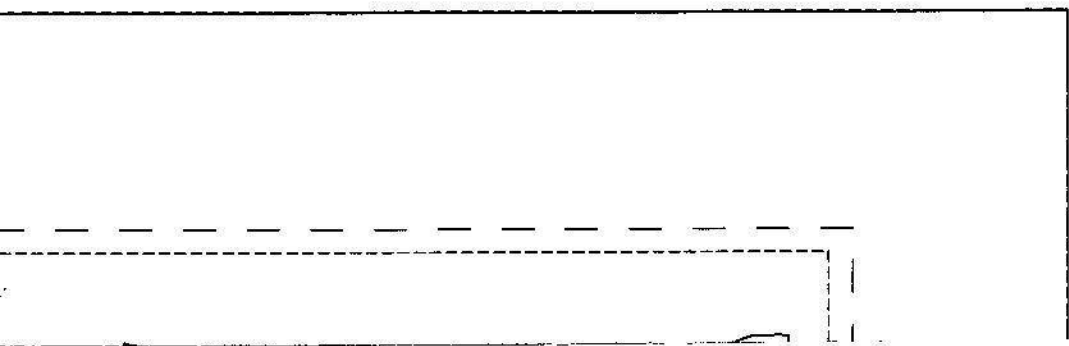
L. Make from 1/4" material

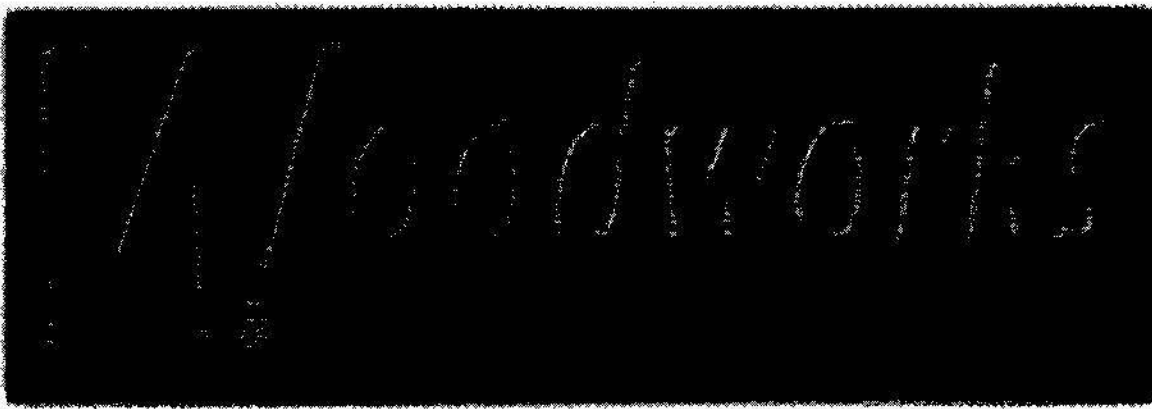


J. Make from 1/16"



J. Make from 1/16" material





FULL SIZE PATTERN SECTION NO. 2 MARCH 2004

Side A

Night Stalker..... from page 34

Frames for Good Memories.....from page 48

Side B

Basketweave Jewelry Box..... from page 52

Mammoth..... from page 62

Cajun Gator Intarsia..... from page 66

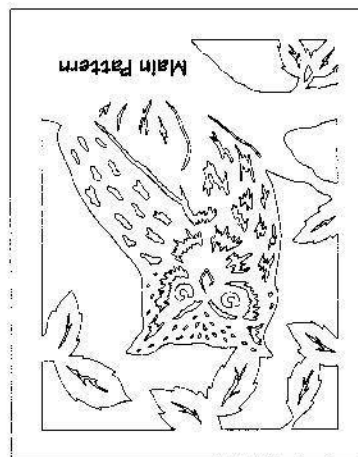
Metric Conversions:

1 inch = 25.4mm = 2.54cm = 0.0254m

Common Measurements:

1/16" = 1.59mm	5" = 12.70cm
1/8" = 3.18mm	6" = 15.24cm
1/4" = 6.35mm	7" = 17.78cm
3/8" = 9.53mm	8" = 20.32cm
1/2" = 1.27cm	9" = 22.86cm
5/8" = 1.59cm	10" = 25.40cm
3/4" = 1.91cm	11" = 27.94cm
7/8" = 2.22cm	12" = 30.48cm
1" = 2.54cm	24" = 60.96cm
2" = 5.08cm	36" = 91.44cm
3" = 7.62cm	48" = 1.14m
4" = 10.16cm	60" = 1.52m

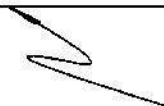
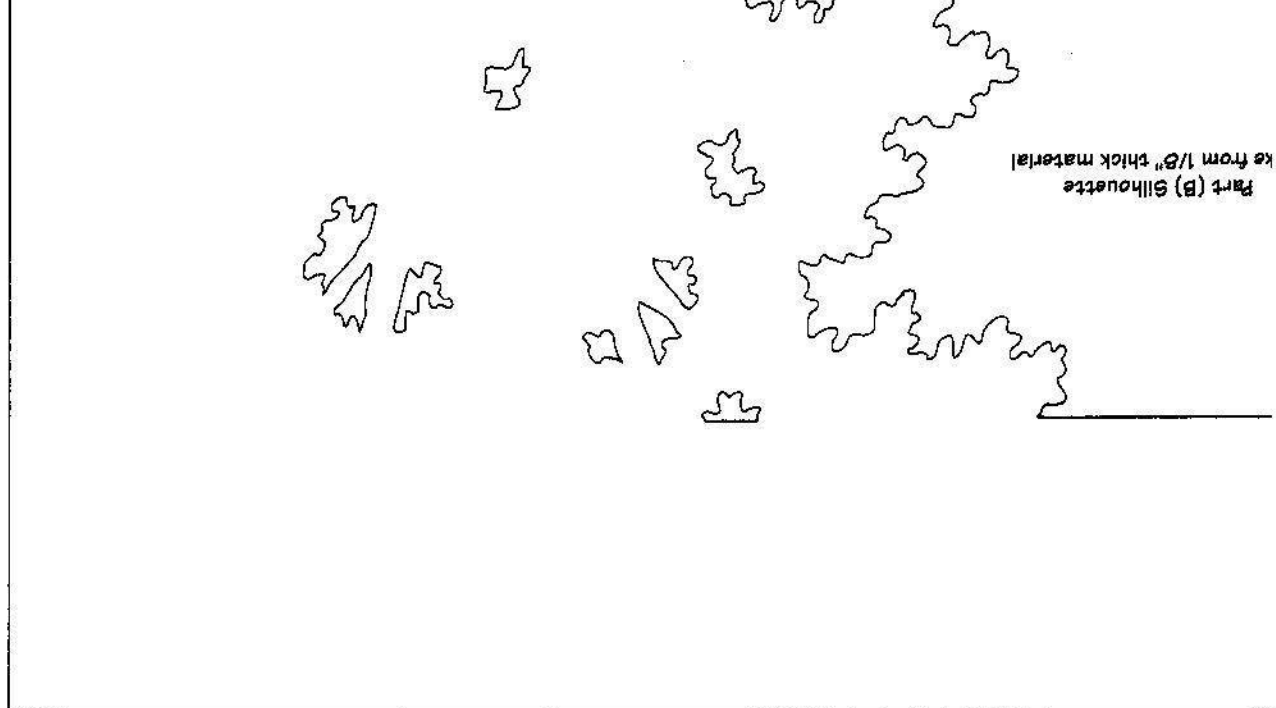
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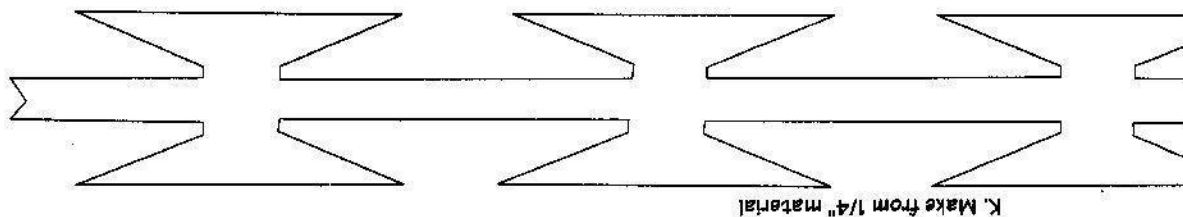
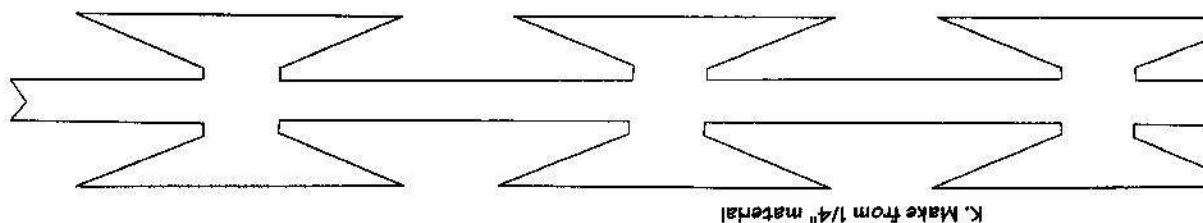
Reduced versions - for reference only:

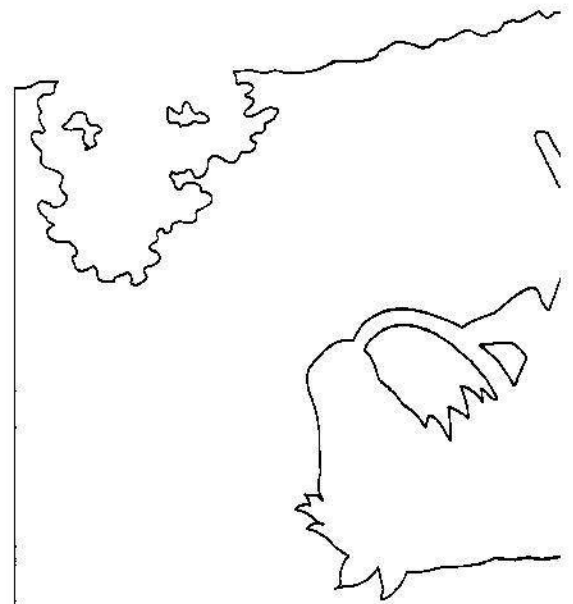
Note: leaf overlay shown with heavier lines





silhouettes (B) are identical (10" x 12").
backer (D) share the same (10" x 12") outer dimensions.





Part (A) Border panel
Make one for each frame from 1/8" thick material

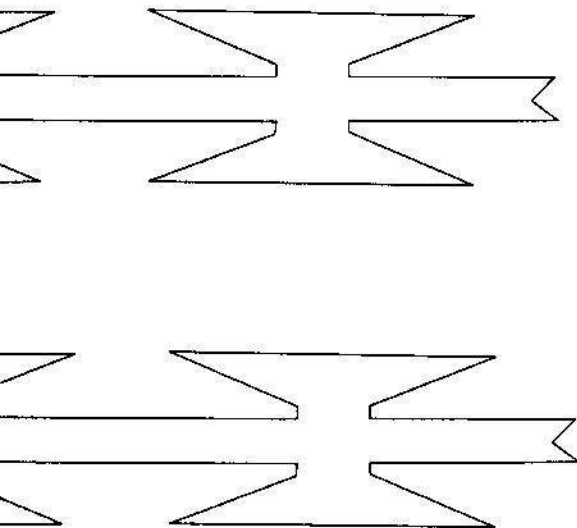
Part (C) Spacer
Make one for each frame from 1/4" thick material

(B) Silhouette
1 1/8" thick material

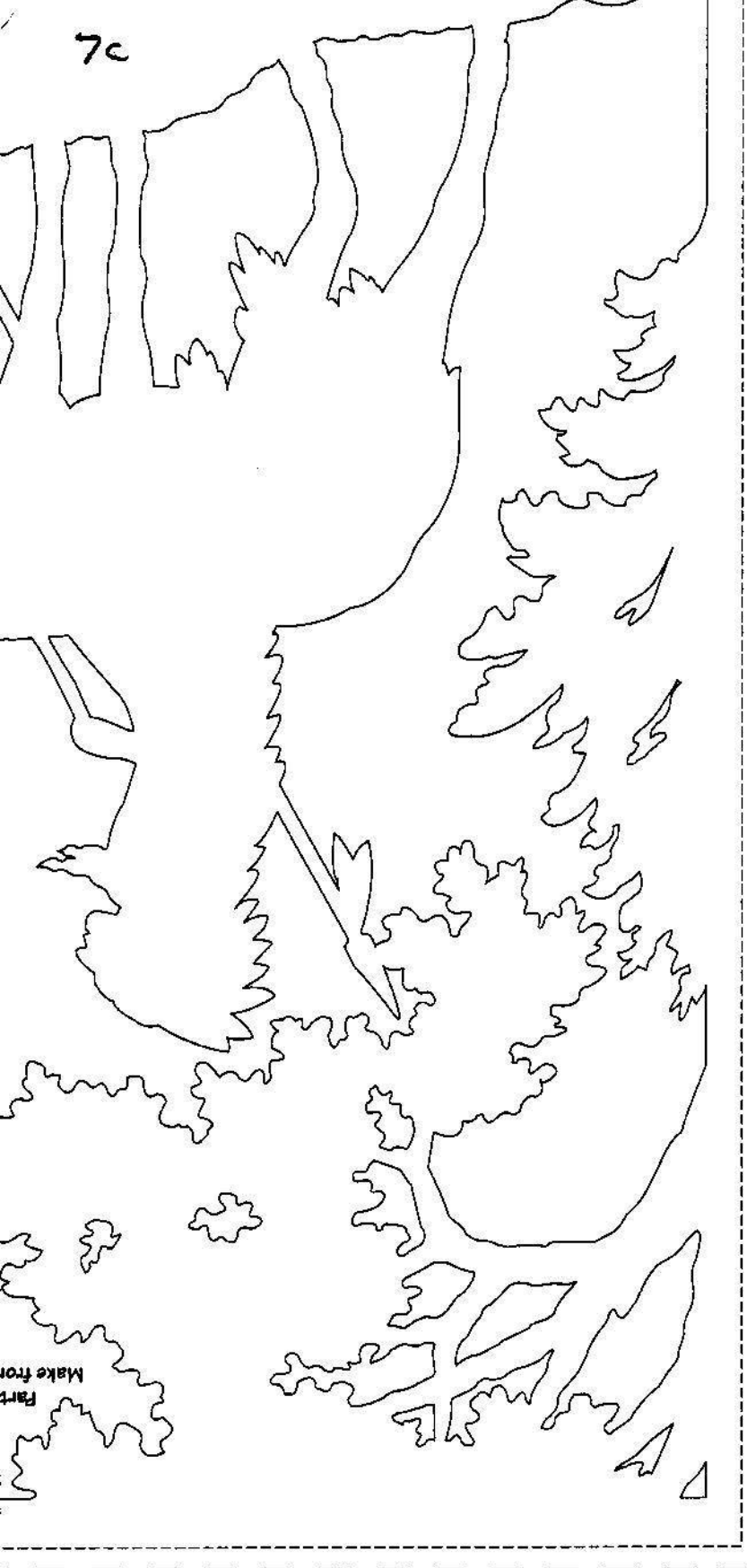
Outer dimensions of both
Also, the border panel (A), spacer (C), and

D. Backer
Make from 1/4" thick material

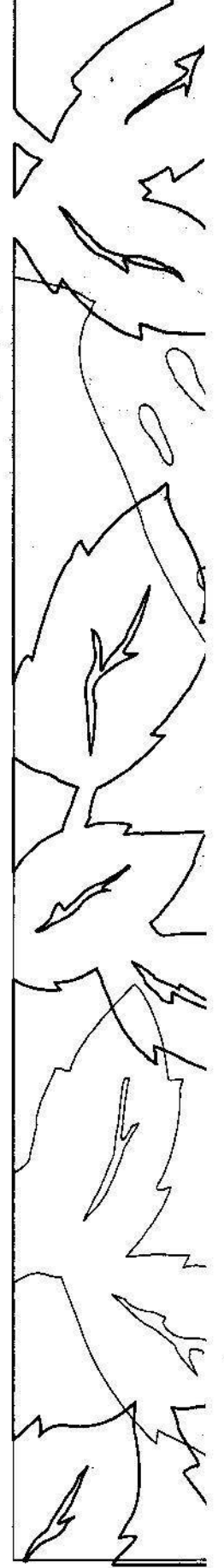
Full Size Patterns
Frames for Good Memories
from page 48

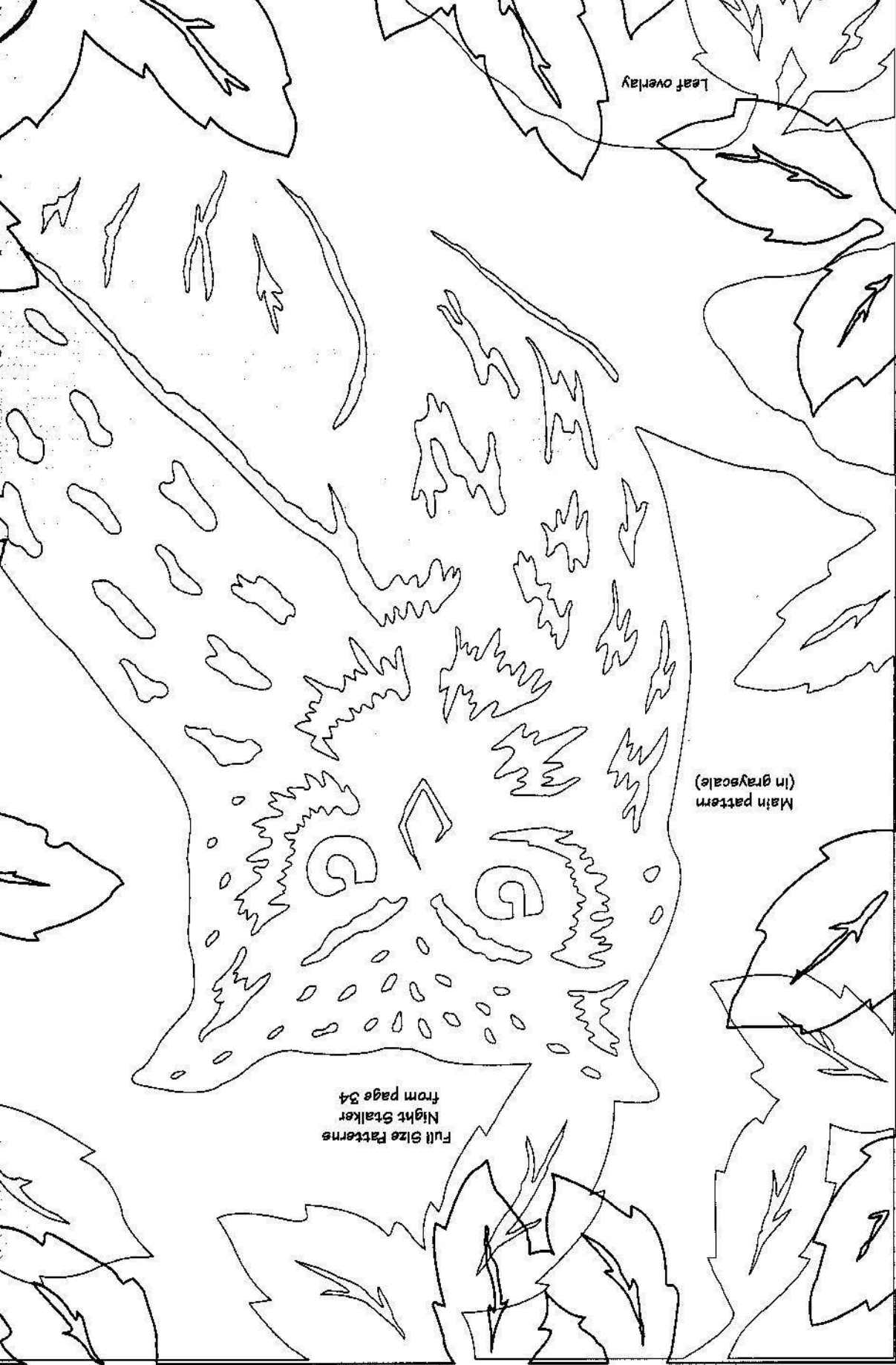


7c



Part
Make from

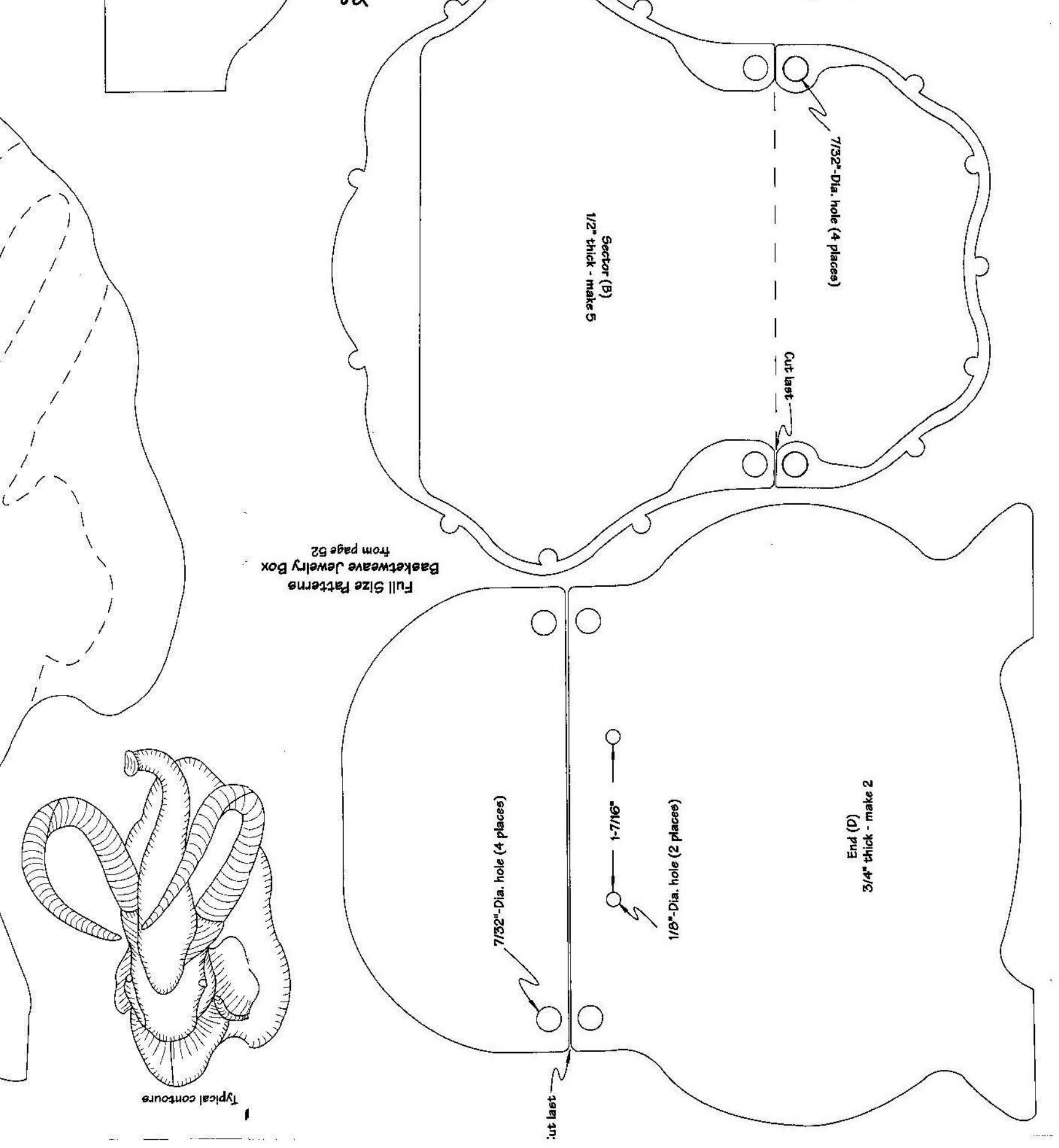
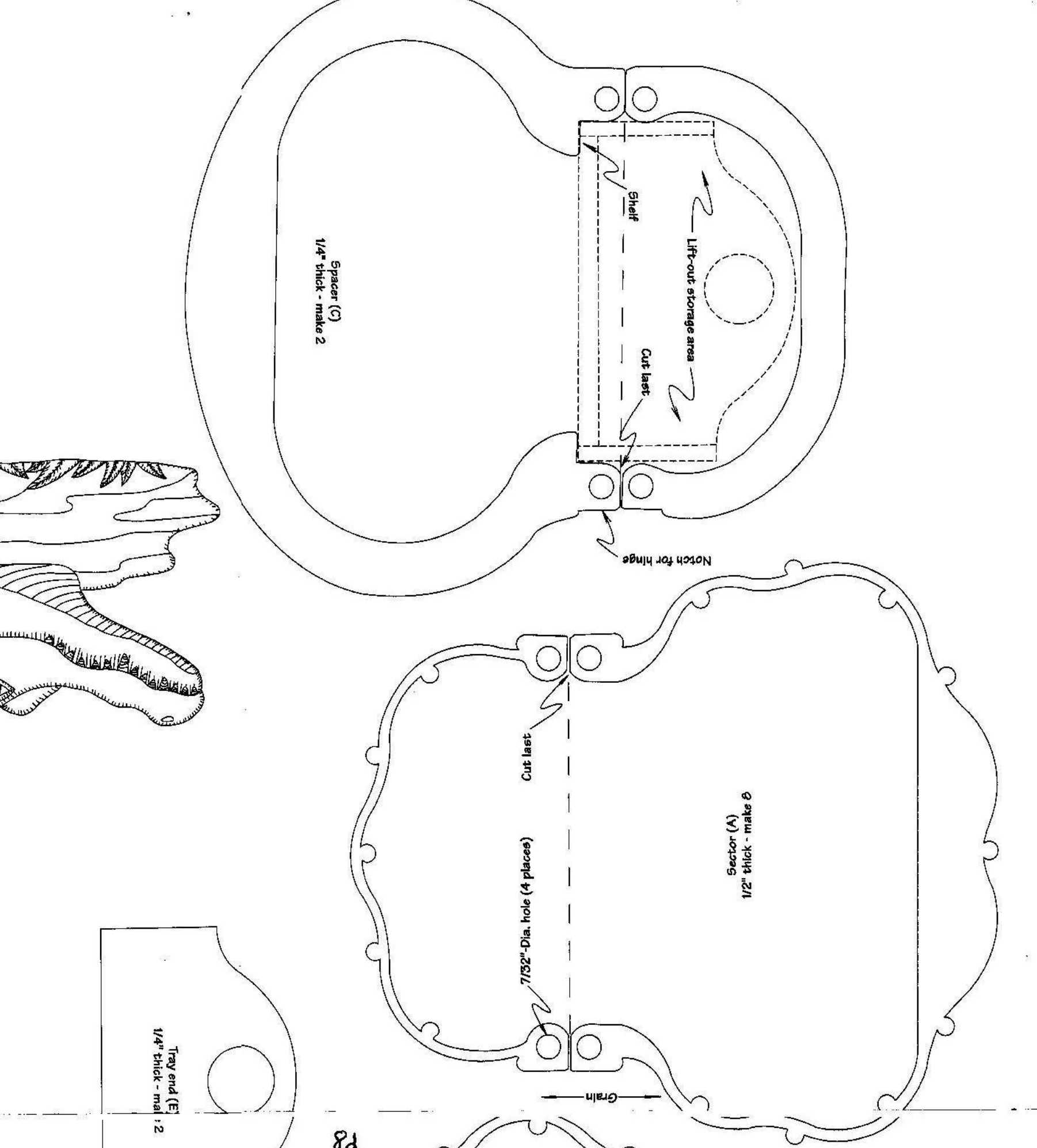
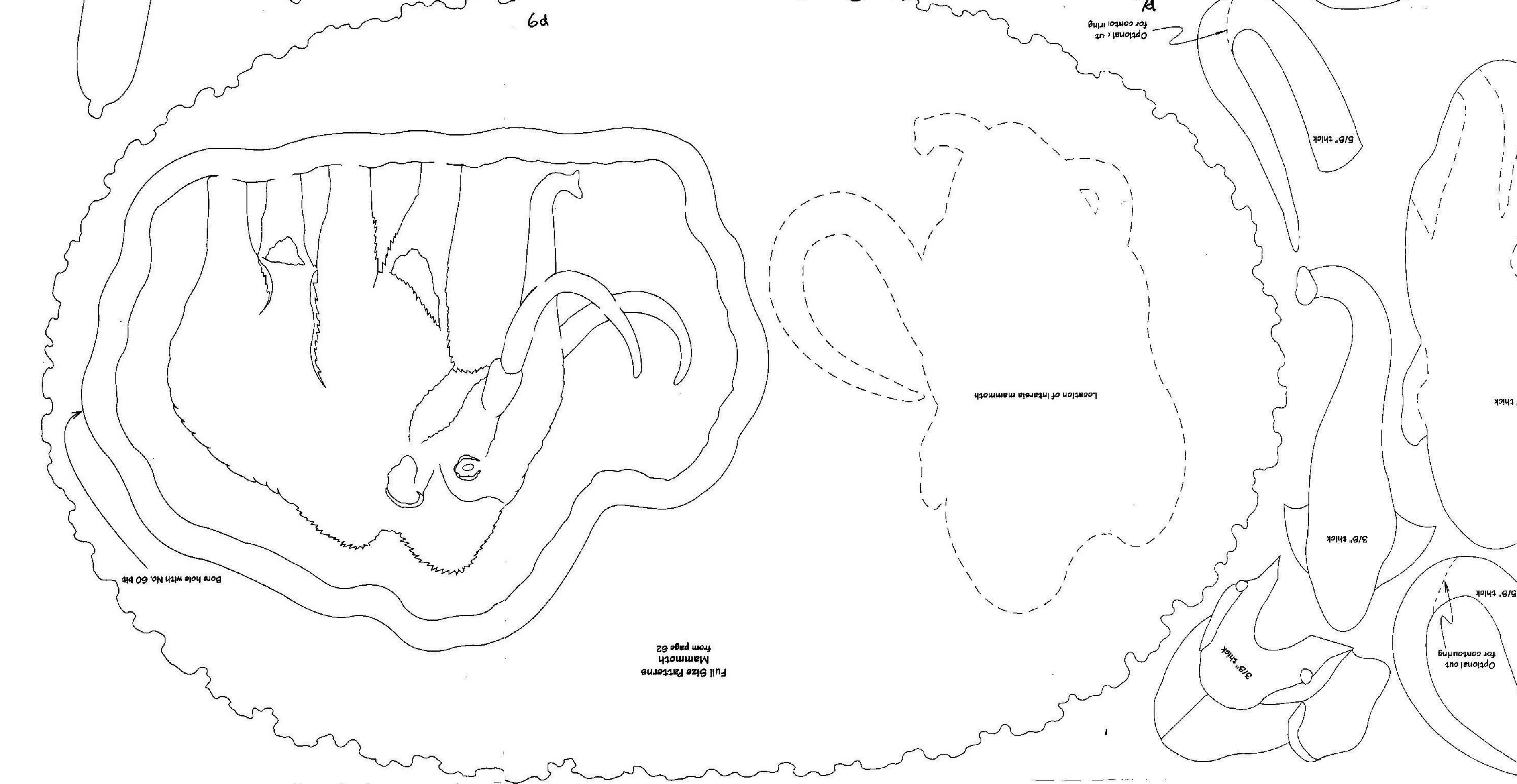
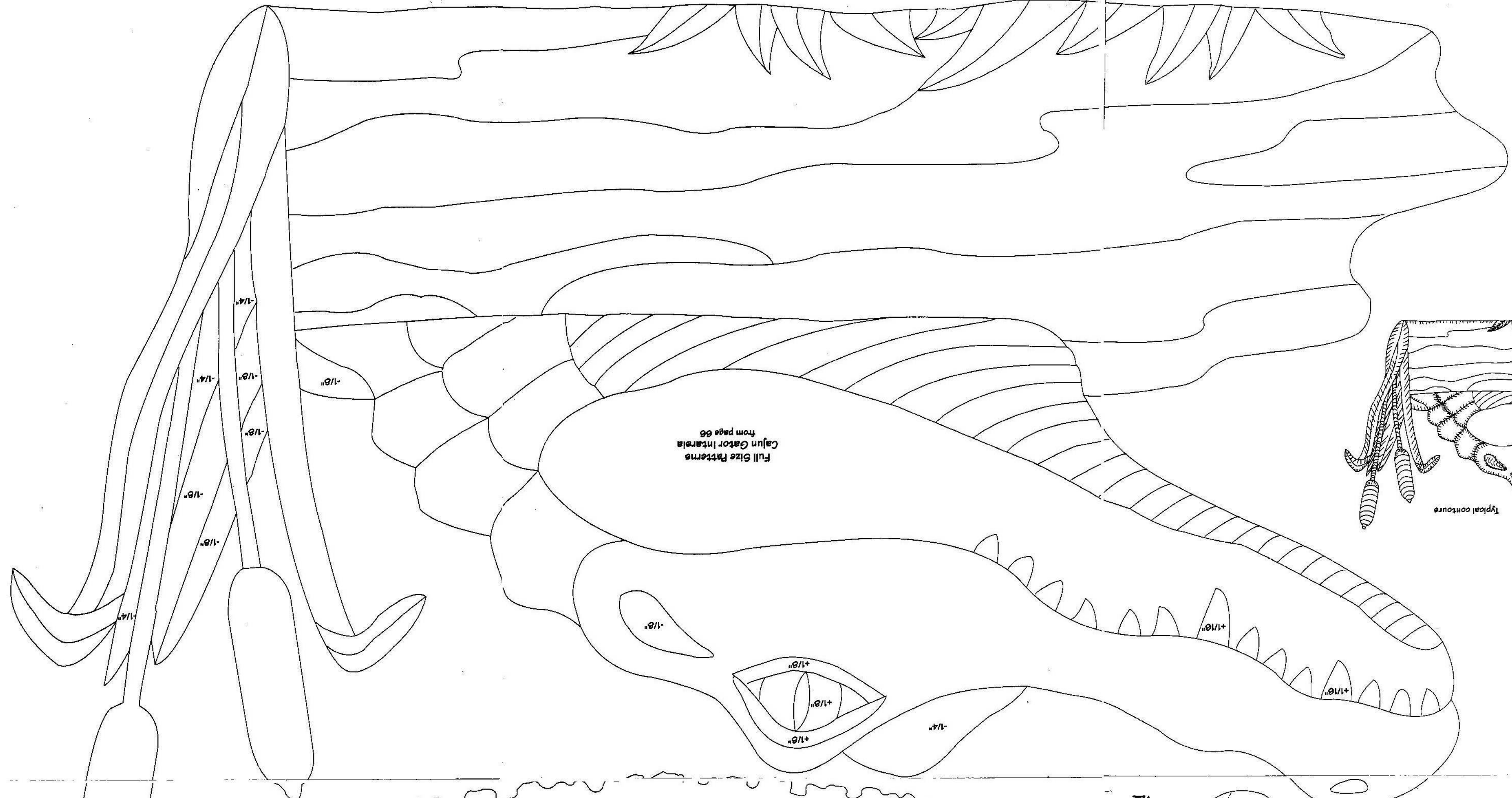




Leaf overlay

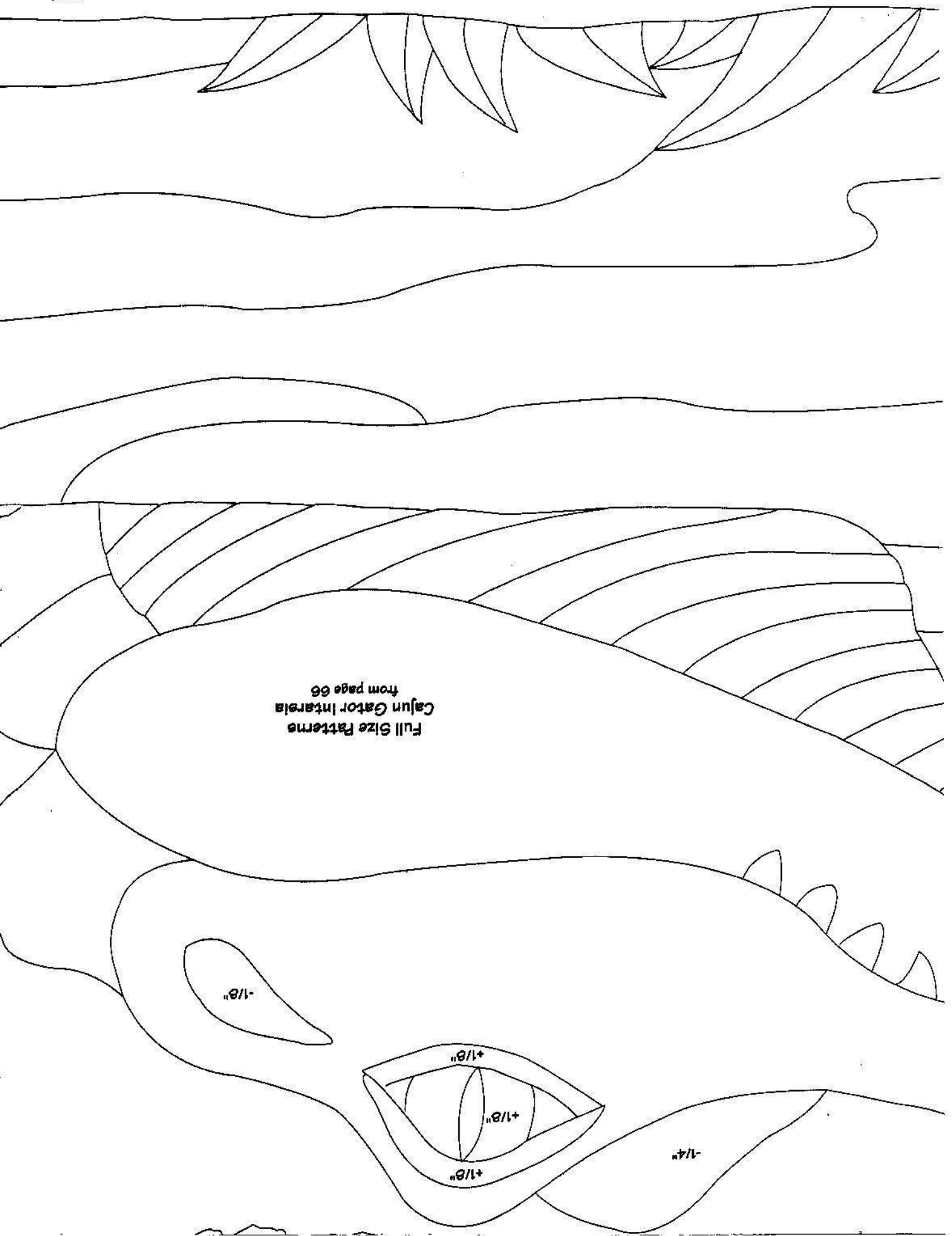
Main pattern
(in grayscale)

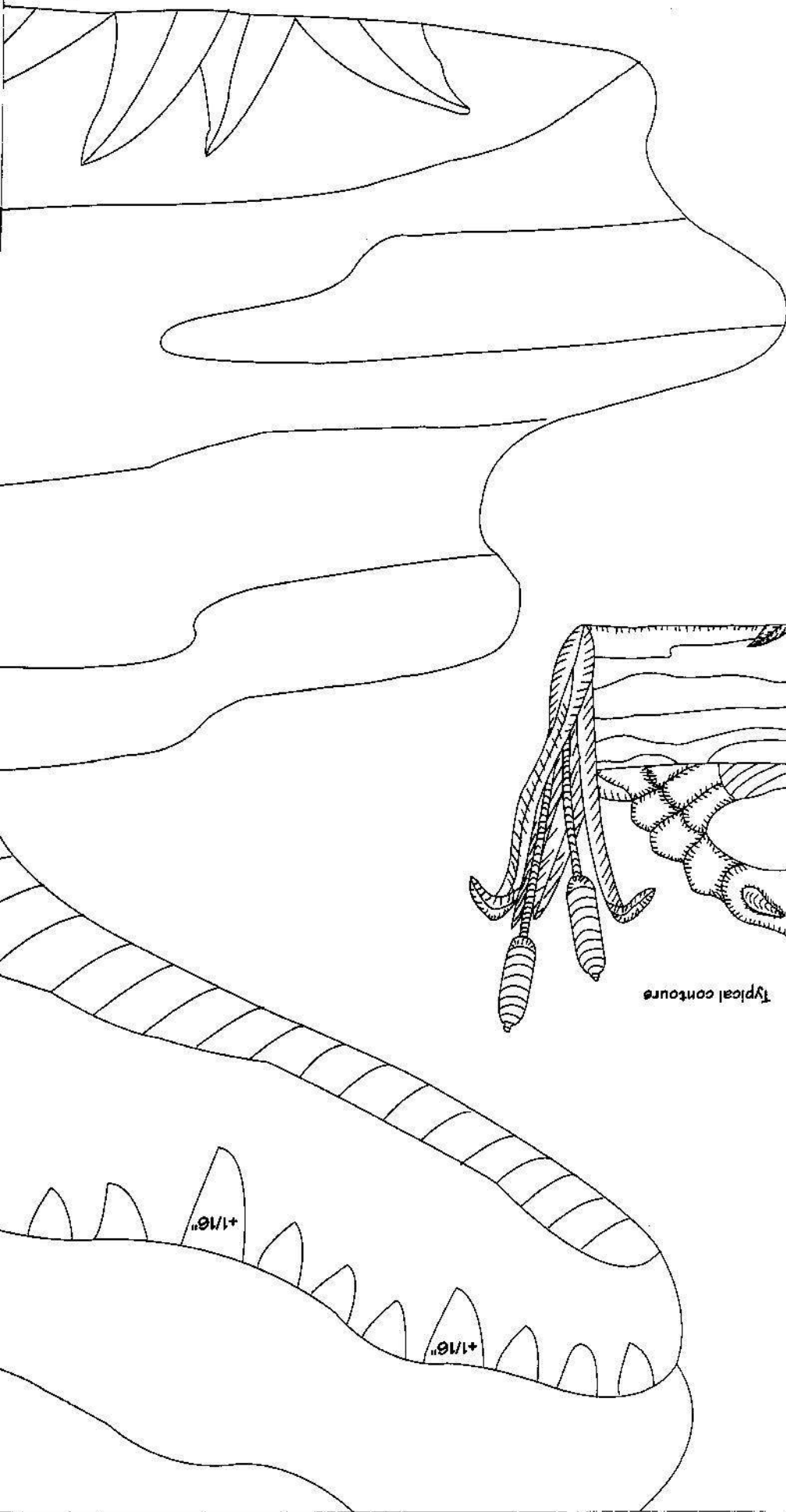
Full Size Patterns
Night Stalker
from page 34



1a



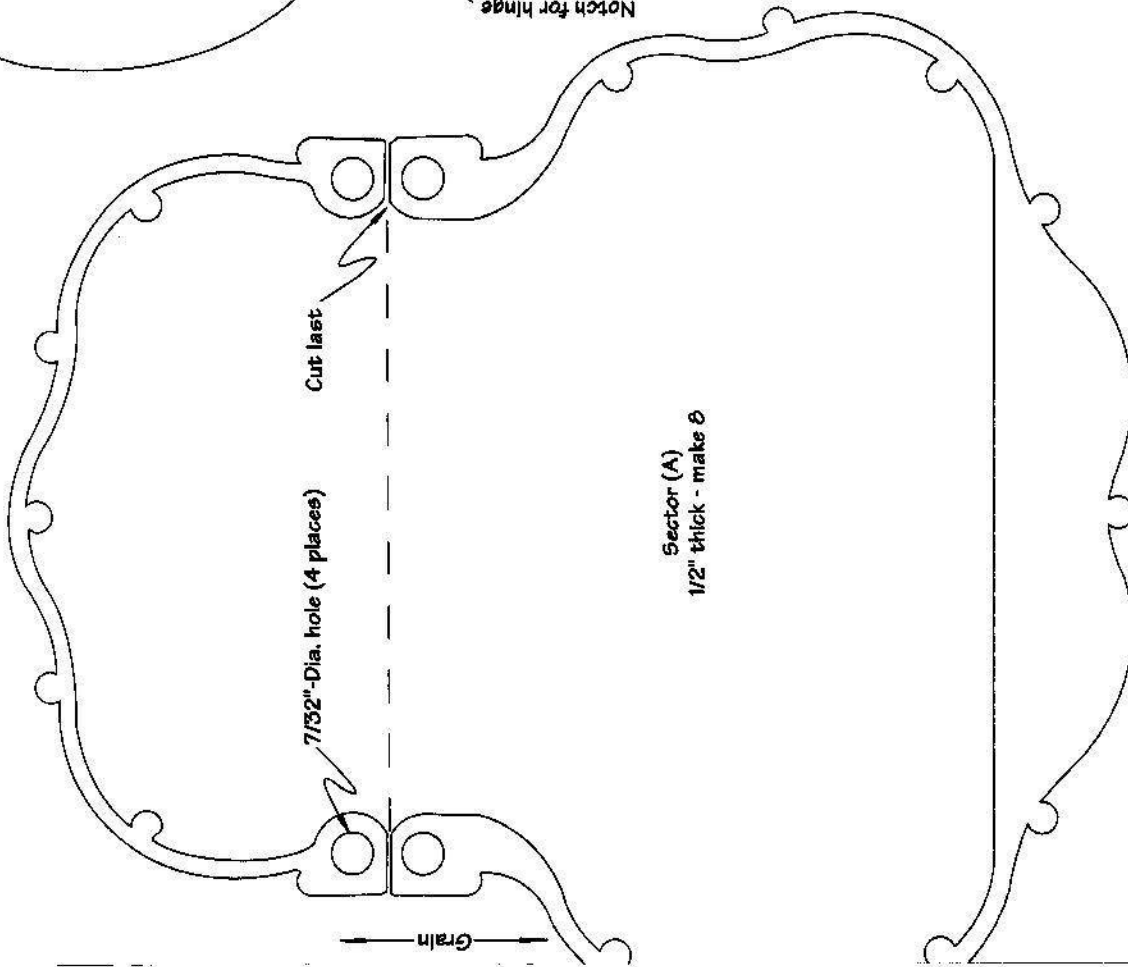
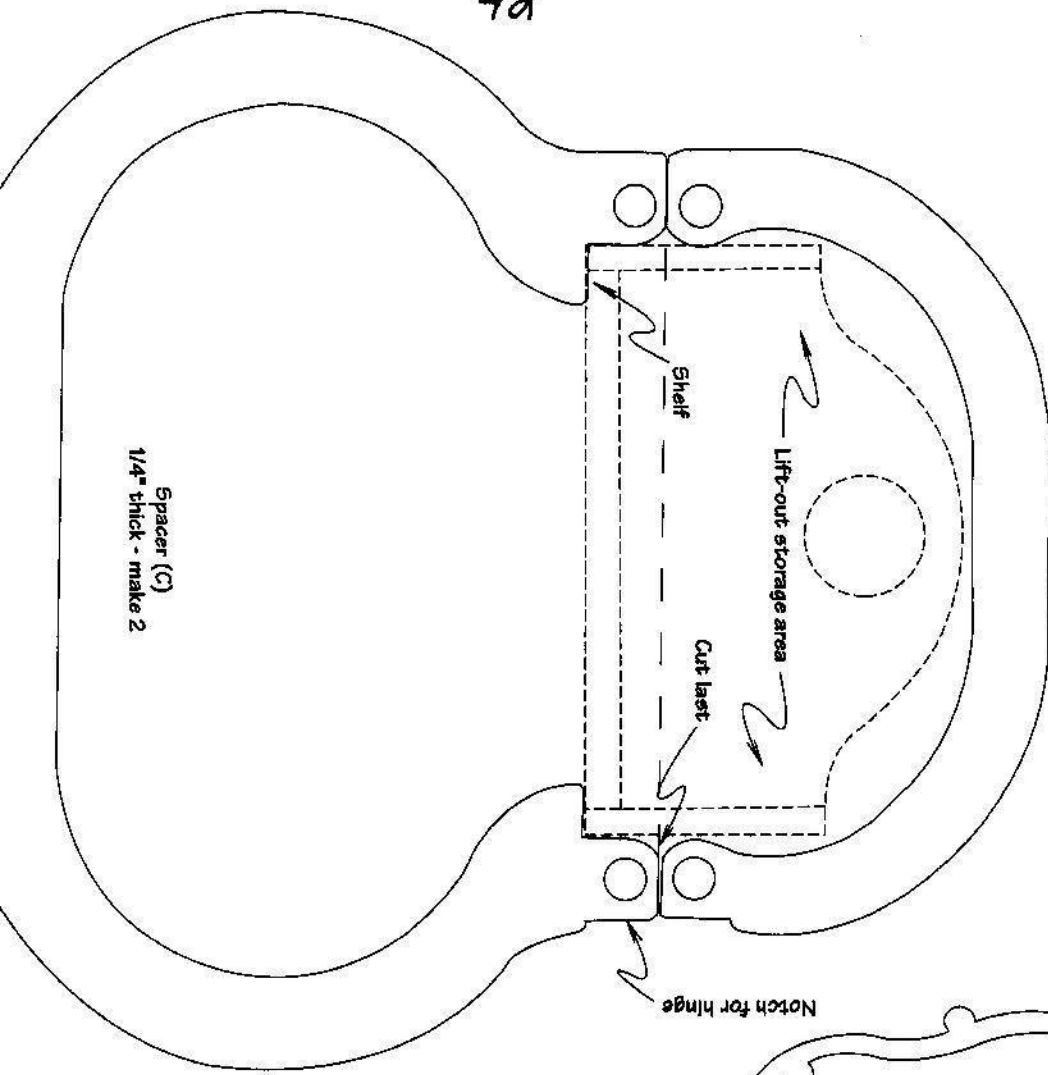




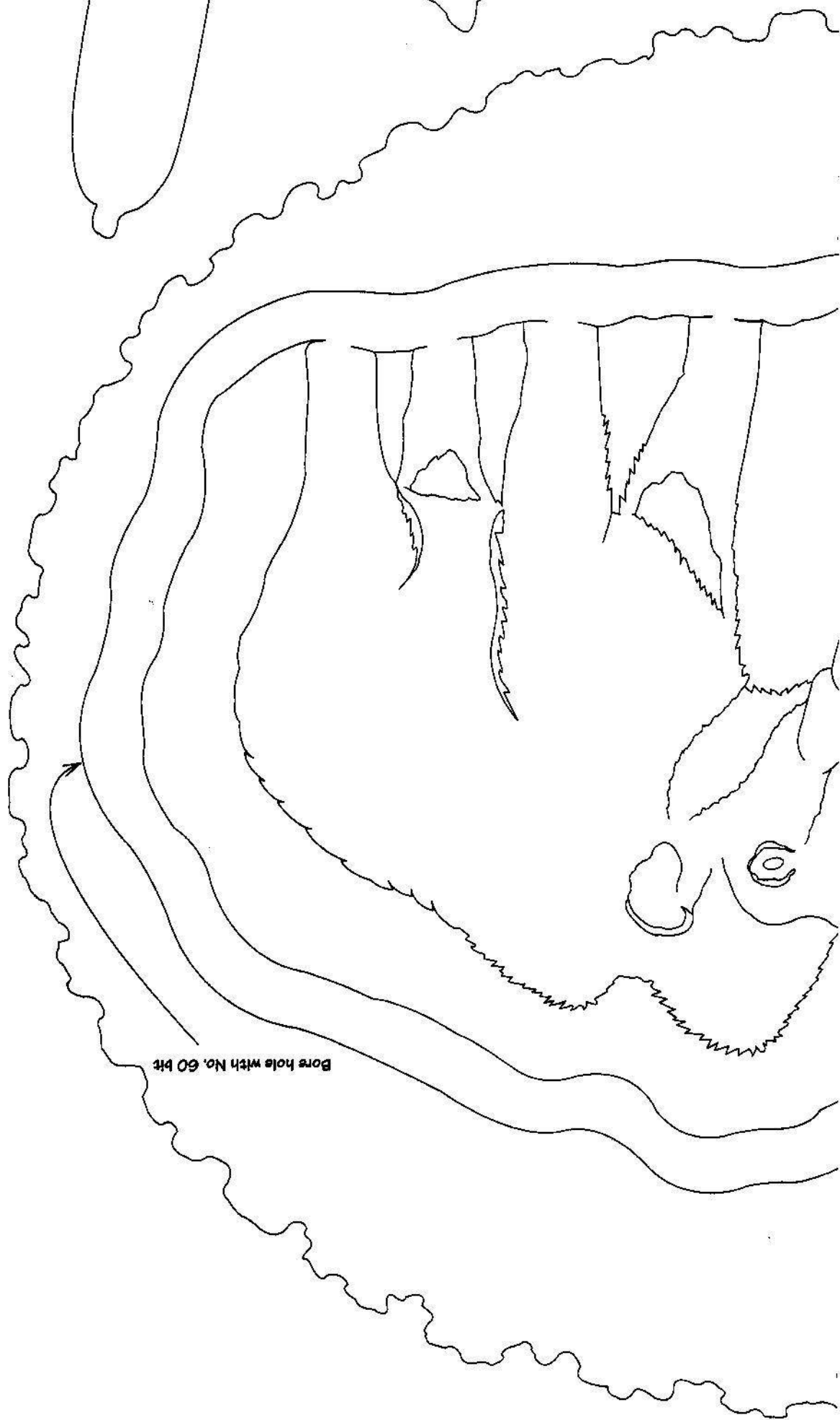
typical contour

Tray end (E)
1/4" thick - mal

4d



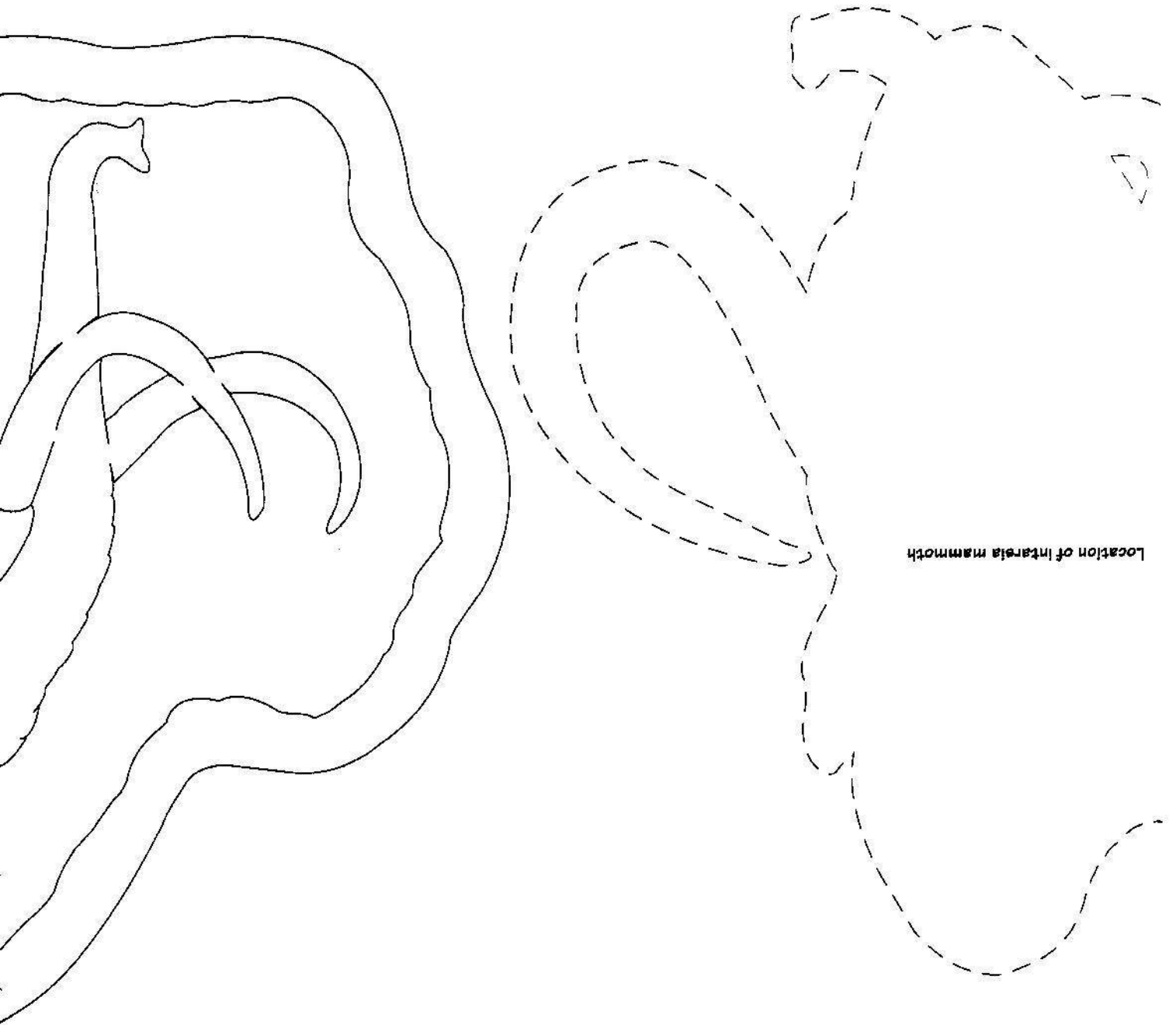
5a



Bore hole with No. 60 bit

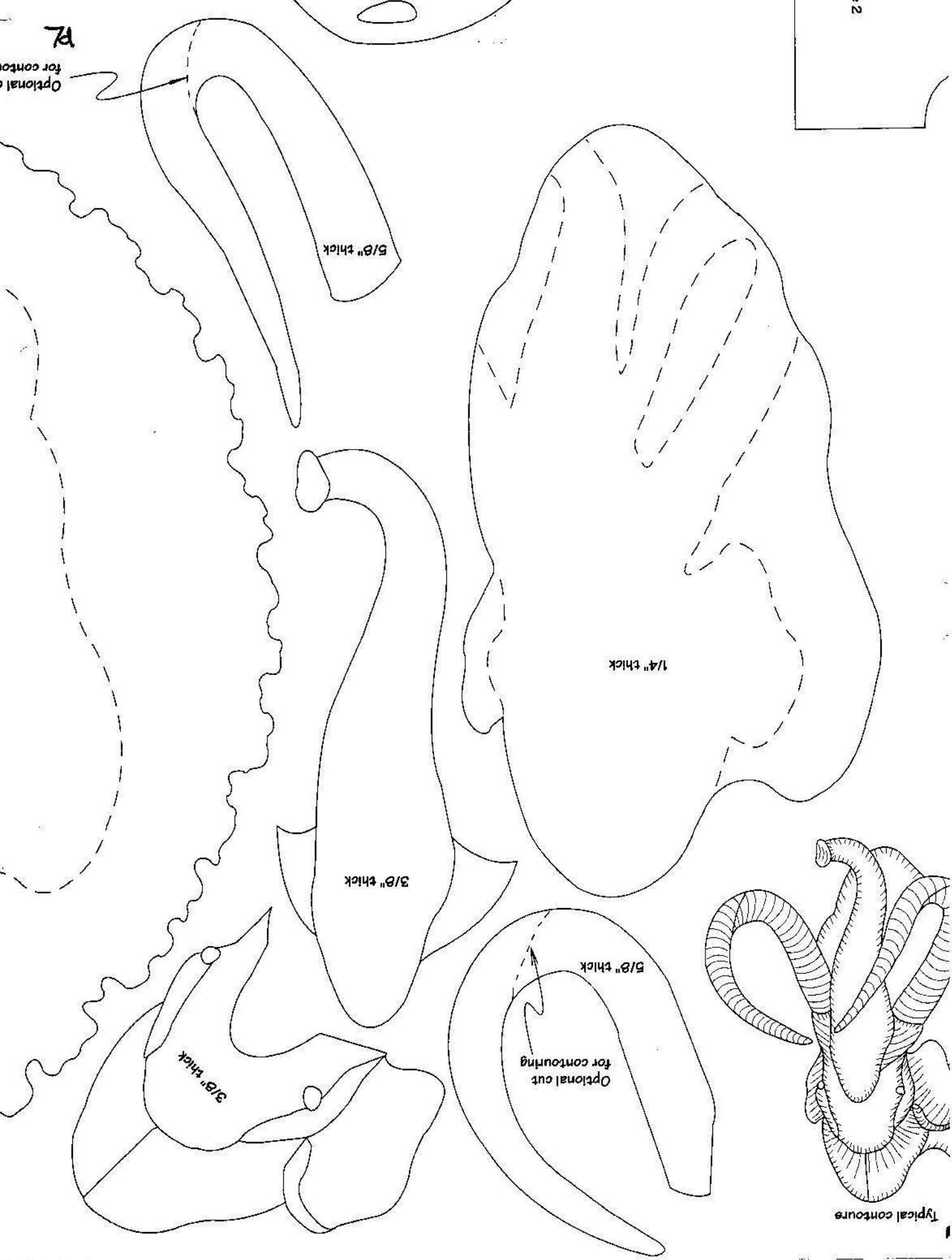
6d

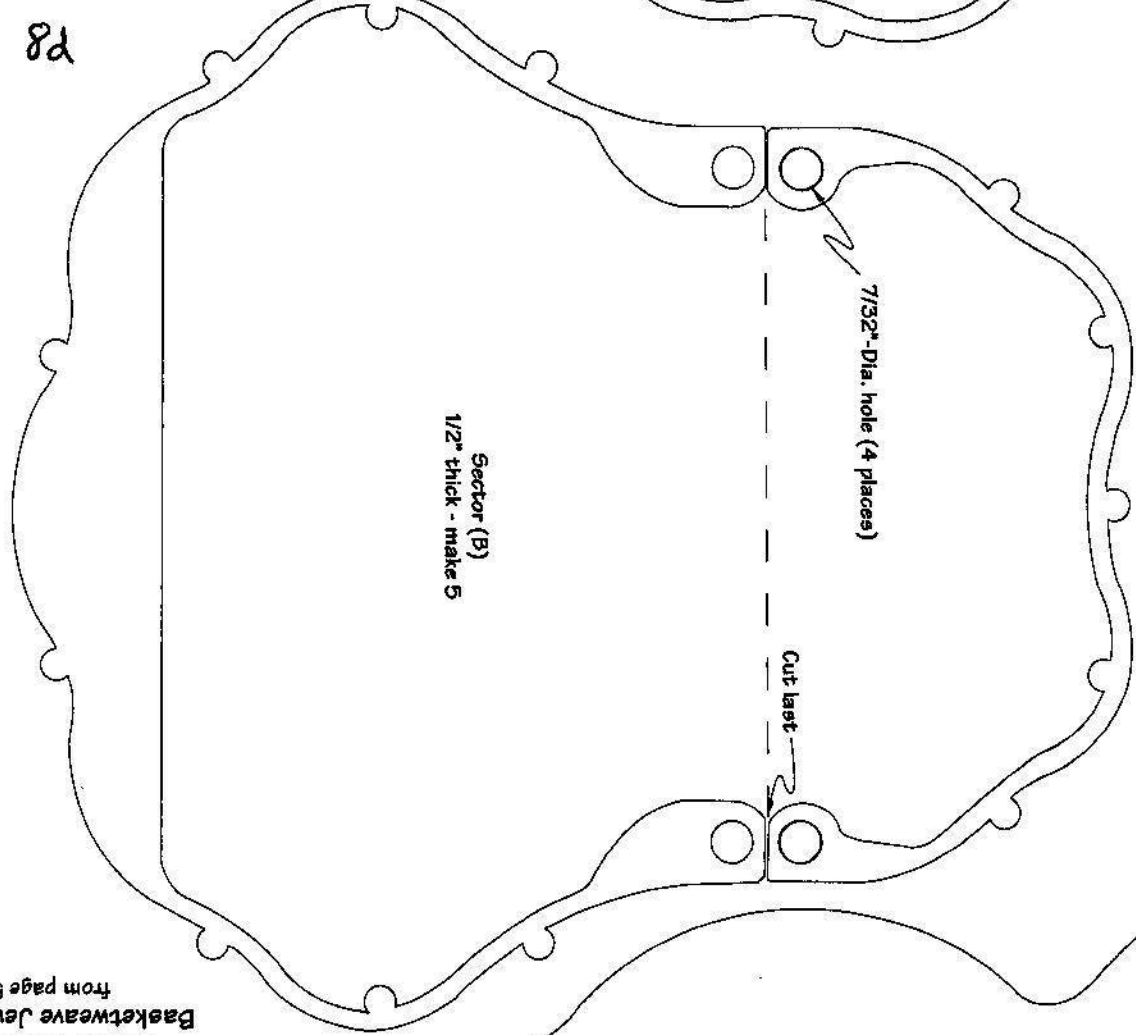
ut
rling



Location of Intarsia mammoth

Full Size Patterns
Mammoth
from page 62





Full Size Patterns
Basketweave Jewelry Box
from page 52

