

**BEST
SELLER**

GREAT BOOK of WOODBURNING

REVISED AND EXPANDED SECOND EDITION



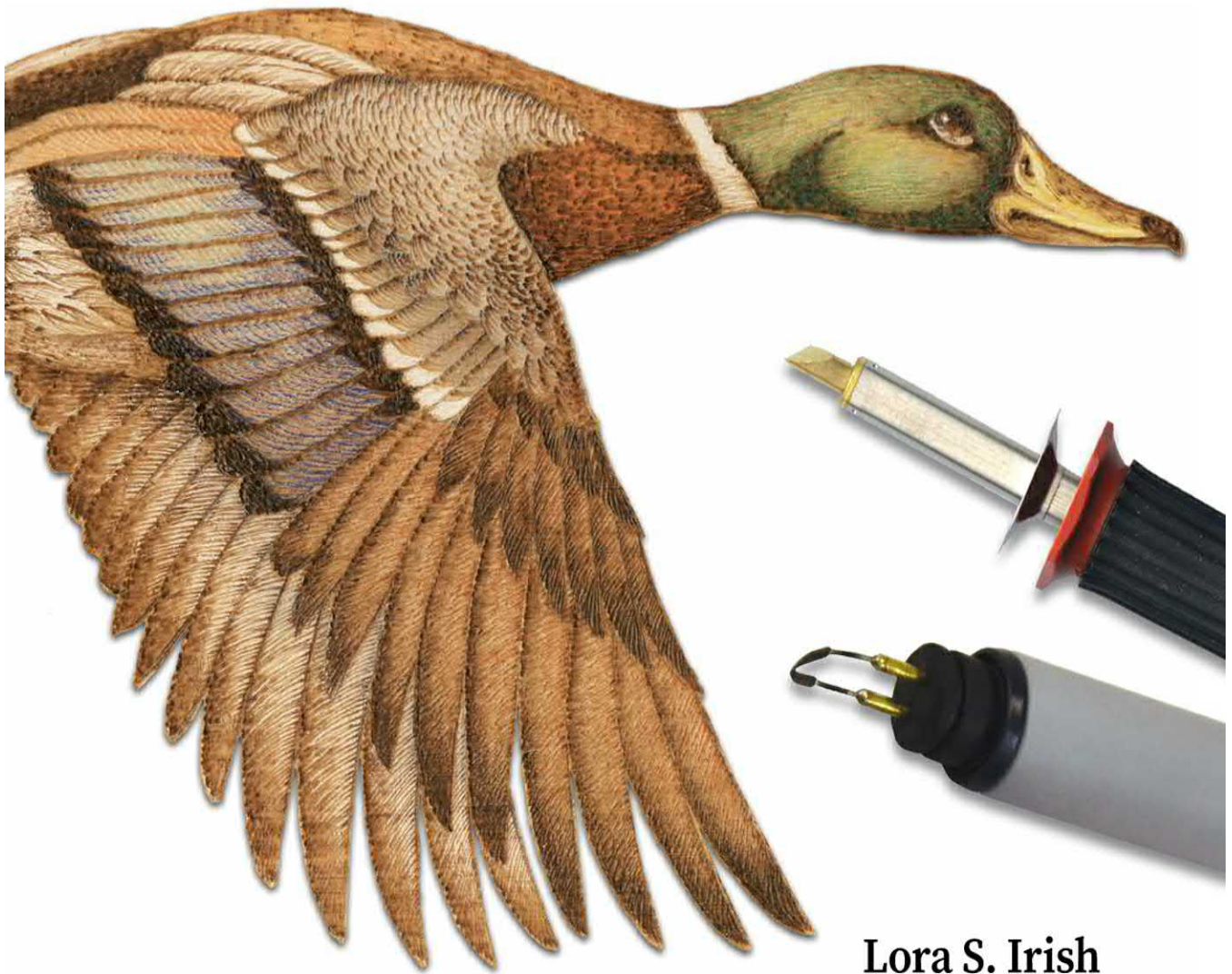
Lora S. Irish

**Pyrography Techniques, Patterns, and Projects for All Skill Levels
with 40+ Original, Traceable Designs and Step-by-Step Instructions**

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by Lora S. Irish



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Dedication

This work is dedicated to Michael, my beloved husband and best friend, who has encouraged and emotionally supported me in so many loving ways through my life's journey as a fine artist.

Acknowledgments

I would like to extend my deepest appreciation to the team at Fox Chapel Publishing—to Alan Giagnocavo, Peg Couch, Gretchen Bacon, Troy Thorne, and Linda Eberly for their work on the last edition; and to Gretchen Bacon, David Fisk, Wendy Reynolds, and Christa Oestreich for this edition. It is a true delight to work with such a professional group dedicated to creating the best books and instruction manuals possible.



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About the Author



Lora S. Irish is an author, artist, carver, and pattern designer residing in Mount Airy, MD. She has written *Landscape Pyrography: Techniques and Projects*, *Crafting with Gourds*, *Finishing Techniques for Woodcrafters*, and many other Fox Chapel Publishing books. For more of her work, visit lsirish.com.

Introduction

Whether you've never tried pyrography before or you've simply used it to sign or enhance projects created in other media, this book will show you how to create beautiful pieces with only a pyrographic tool. Today's pyrographic equipment can be both inexpensive and readily available, so getting started is easy to do.

Although it is often referred to as woodburning, the art of pyrography can be worked on just about any natural surface, which gives you a wide variety of possibilities on which to explore this craft. Wooden box tops, gourd bluebird houses, watercolor paper that's suitable for framing, and even leather belts are used as working surfaces for burned designs. For this book, I worked the finished samples on several different species of wood, such as birch plywood and basswood. However, the techniques and instruction do apply to other materials, such as leather, paper, and gourds.

As you work through the lessons, ideas, and patterns in this book, you will learn how to start with a drawing or a photograph and translate it to a fully finished, finely detailed woodburned project. Working step-by-step, we will explore what materials and tools you will need for your woodburning kit, which woods might best suit your project, how to prepare the wood surface and transfer your patterns, how to judge the depth of color or tonal value for each area of your design, and of course, how to create and control the woodburned tonal values through the use of textures and layers. Once your woodburning is complete, we will focus on how to add color to the burning as well as what top finishes you may wish to use.

You will also notice, as you browse through the pages, that the step-by-step projects and the patterns are broken into beginner, intermediate, and advanced sections. This breakdown of patterns and projects is designed to get you started in woodburning and to provide you with ideas and patterns to match your skill level as you continue to grow in your art. The projects are presented so that you can learn not only how to woodburn a design or pattern but also why a particular technique, tonal value, or texture was used. With the basic instructions in this book and a little practice, you will soon be able to woodburn any drawing, pattern, or photograph with confidence and expertise.

What is Pyrography?



Pyrography: The art of burning a design or pattern into a natural surface, such as wood, gourds, leather, or cotton rag watercolor paper using heated woodburning tools or a fine flame.

Pyrographic Process: The action of creating a detailed drawing onto a natural surface by using a woodburning tool to control the depth and thickness of the burned line and to develop tonal depths of shading. Pyrographic designs and patterns include landscapes, house portraits, dragons, comical firemen, wall clocks, wild roses, cowboy boots, old cars, flying mallard ducks, Western horses, and many other subjects.

Pyrographer: The person who gets to have all of the fun, excitement, and enjoyment of creating those burned drawings on clocks, box lids, jewelry, gourd birdhouses, tabletops, bookshelves, door hangers, Christmas ornaments, leather key holders, belts, cowboy chaps, greeting cards, framed art, and much more!

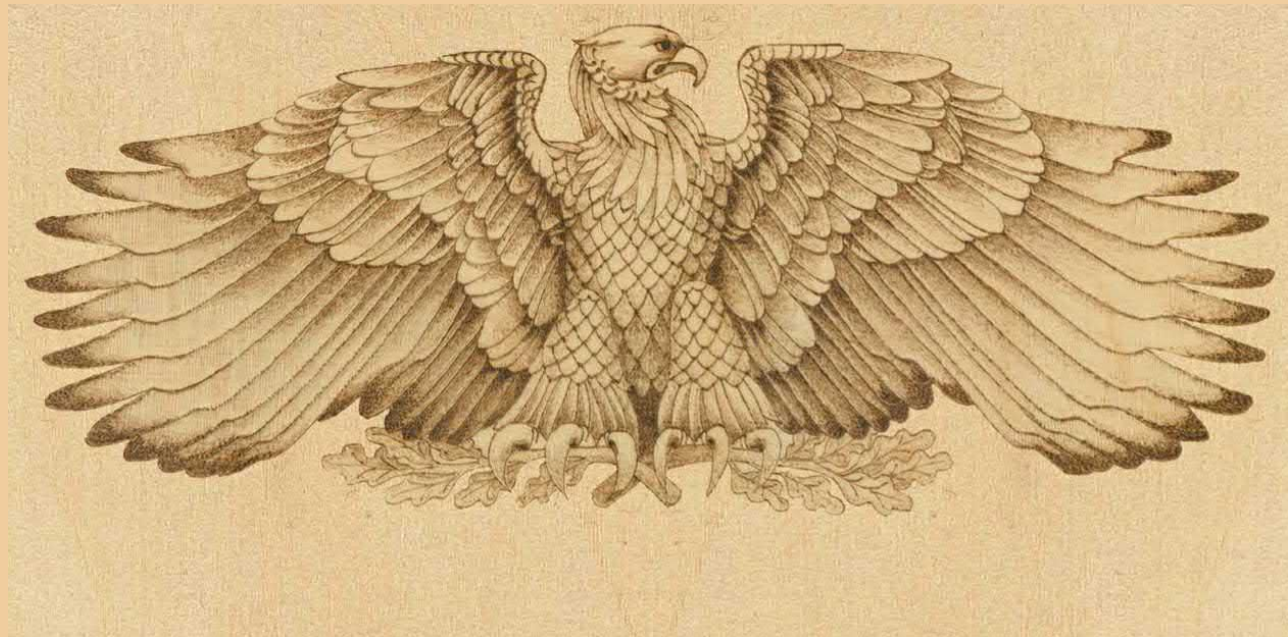




This *Western Dragon* banjo was created using half of a dried kettle gourd for the banjo's barrel, 1/8" (3.2mm) birch plywood for the banjo's faceplate, and sugar pine for the neck. The dragon's tails were elongated to flow and intertwine into the neck area.

Gallery

Once you learn how easy it is to create a stunning and dramatic woodburned design, you will discover a wide variety of project surfaces that are perfect for your next burning. In this gallery section, I will share a few of my ideas, including a gourd banjo, thumb drums, a basswood boat oar, and even an office desk set.



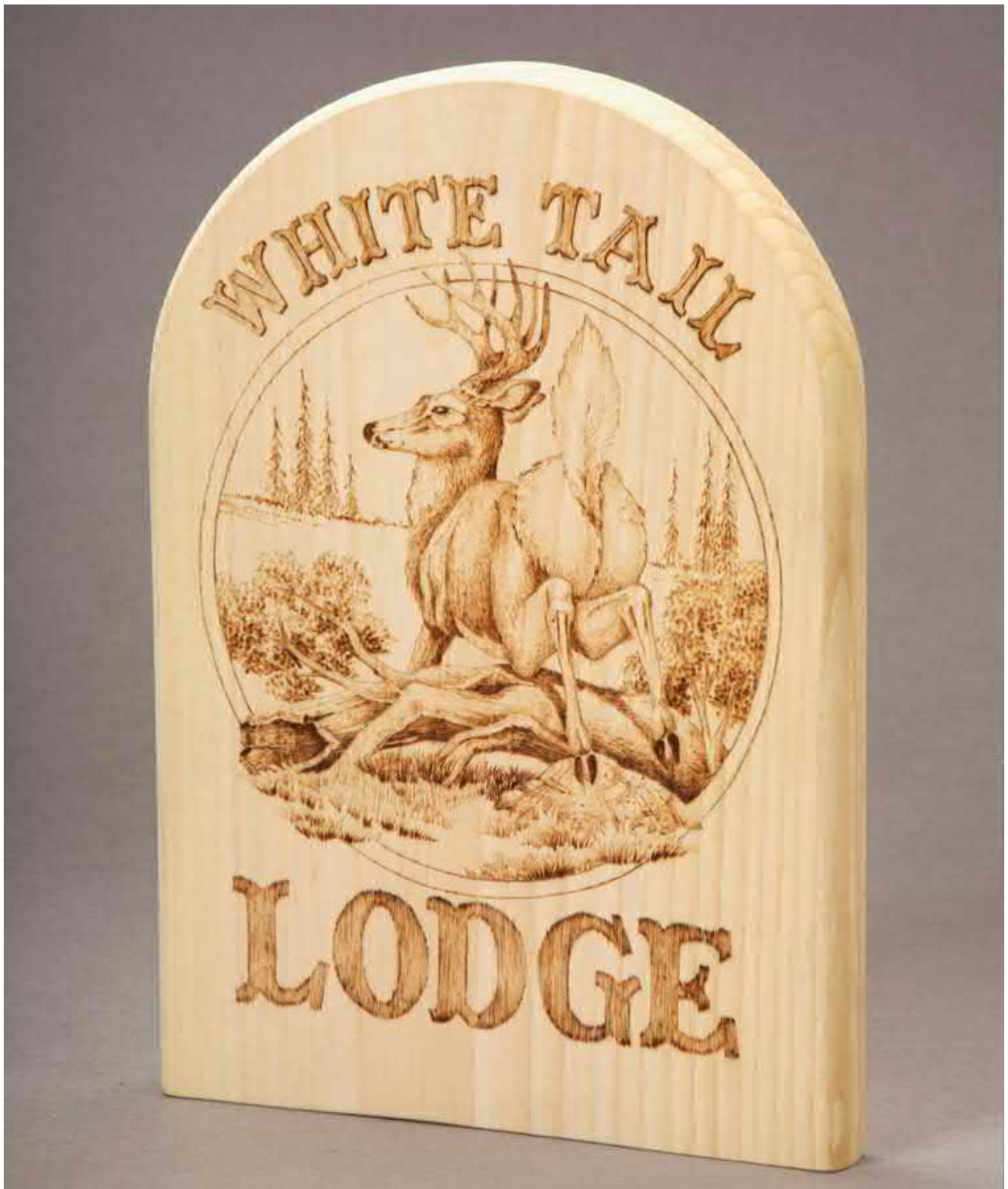


Birch plywood comes in several thicknesses, from $\frac{3}{4}$ " (2cm) for large furniture construction to $\frac{1}{8}$ " (3.2mm) for small wall plaques and framed pictures. Plywood sheets allow you to combine your favorite hobbies, such as scroll sawing or woodworking, with woodburning. This *Church Mantel* design, burned into a birch

plywood wall shelf, will make a lovely backdrop for your favorite collectible.

Mule Deer Portrait (see pattern here) was the perfect design for this handcarved basswood canoe oar. Basswood burns easily, creating the dark tones needed to capture the deep tones of the deer's face. The feather design was taken from *Buffalo Skull Dream Weaver Circle* (see pattern here).





Woodburning is perfect for outdoor decorations, such as house signs (see *White-Tailed Deer Lodge* pattern here), deck chairs, and wooden planters. Once burned, the brown colors of the design are permanent and weatherproof.







A large dried kettle gourd, 1/8" (3.2mm) birch plywood, and a key set were used to create the thumb drum of *Summer Morning Sun Face/Pentagram Star* (top and inset) and the thumb drum of *American Eagle* (bottom right and left). These would make wonderful gifts for your burgeoning musician (see patterns 1 and 2).



The *Berry Green Man* has been worked on a desk envelope holder. His dark eyes are accented by the dark shadows on the leaf and berry areas.



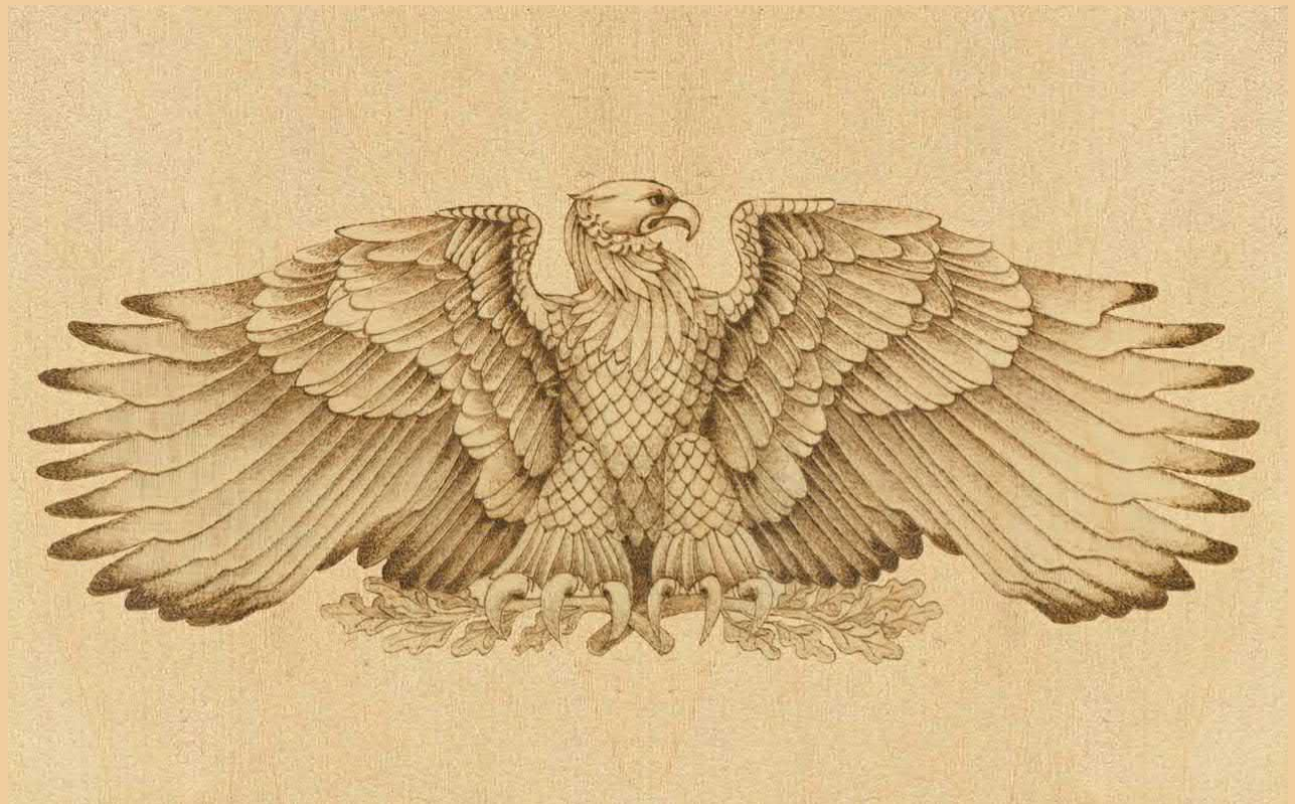
The *Oak Man* was used on the stationary/file holder box as the second piece of this desk set (see pattern on page 152). The back of the box is tall enough to include a small secondary accent of leaves.

Part 1



Woodburning Basics

Woodburning as an art form has many benefits. In addition to being a wonderful way for an artist to express himself or herself, the tools and materials are rather minimal when compared to other art forms like woodcarving and woodturning. In this part of the book, we'll take a look at the tools and equipment you'll need to get started woodburning and address how to keep them in top running order.



Woodburning Tools and Equipment

Woodburning (also known as *pyrography*) is the art of creating simple line designs, highly detailed renderings, and shaded drawings using a hot-tipped pen on natural wood or wood-like surfaces. As the pen is pulled across the surface, the tip literally burns the material to create pale through dark tonal value lines. The pattern of lines and shading strokes that you use in your woodburning work determines the art style of the finished project. Any pattern can be worked in any art style or in a combination of styles.



Safety

Let us take a moment and consider a few simple safety precautions.

1. Your project material, whether it's wood, leather, etc., should be an untreated, unpainted, and unfinished natural surface. Paints, polyurethane sealers, varnishes, and chemicals used in treating wood can release toxic fumes during the burning process.
2. Use the internet to research the material you will be burning to discover if it has any toxic properties.

There are several excellent data bases available.

3. Work in a well-ventilated area. A small fan set on your table that points away from your work will help circulate the smoke and fumes. Whenever possible, work near an open window.
4. Avoid laying your project in your lap during the burning steps. This places your face directly above the fumes, which increases your chances of inhaling smoke.
5. Unplug your burning unit from the wall socket whenever you are not working. An unattended hot pen tip can cause fires.
6. While working, set your pens either on the pen stand provided by the manufacturer or on a ceramic tile.





Woodburning/pyrography systems

A woodburning is created with five elements: the woodburning unit, the pen tips, the material on which you are working, the pattern or design you will burn, and the art style you will use to create the design. Let's look at the pyrography systems first.

There are three systems for woodburning: one-temperature tools, rheostat-controlled tools, and variable-temperature tools. Which you choose depends on both your interest in this craft, your pyrography budget, and the material on which you will be working.

One-Temperature Tool

The one-temperature tool has the heating elements inside of the handle of the tool. It comes with a variety of interchangeable brass tips that are placed in a threaded receptacle at the end of the tool. Tips for this burning system include the universal tip, calligraphy tip, cone tip, large ball shader, and large flat shader (see **Figure 1.1**). When used delicately, brass tips are perfect for wide, thick black line work on heavily sapped woods, such as white pine, sugar pine, and cedar.



Figure 1.1. The screw-in brass burning tips shown here fit both the one-temperature burning unit and the rheostat unit.

Once plugged into an electrical outlet, the tool reaches an even but high temperature in about five minutes (see **Figure 1.2**). The tonal value work in your project must be controlled through the textures or strokes that you use and the speed of the stroke. Very pale tonal values are burned by applying light pressure to the tip against the wood and moving the tool tip quickly through the burn stroke. Darker tones use a medium pressure and slower motion.



Figure 1.2. Top is a regular one-temperature tool that reaches around 950 degrees Fahrenheit. The one-

temperature tool on the bottom has a low-temperature setting around 750 degrees Fahrenheit.

A full range of tonal values can be burned using a one-temperature tool. Burn your pale tones as the tool tip begins to heat up and save your darkest tones for when the tool tip has reached its full setting. Tools in this system with a low temperature maximum are also great for more delicate materials (see **Figure 1.3**).



Figure 1.3. A one-temperature tool with a low temperature is perfect for leather and cloth burnings.

One-temperature burning tools are inexpensive, readily available at your local craft or hobby store, and excellent for first-time woodburners to give this craft a try. I began woodburning twenty-five years ago with this style of tool. Several years ago, I purchased a new one-temperature unit so I would have two tools on the table, each with a different tip, ready for use in my projects. Although I now favor two variable-temperature system tools, I still use my one-temperature system on a regular basis.

Rheostat Tool

This inexpensive beginner's woodburning pen has a rheostat on the power cord, which means you can control the temperature of the burning tip (see **Figure 1.4**). The sample rheostat burner uses the same interchangeable brass tips as the one-temperature tool (see Figure 1.1).

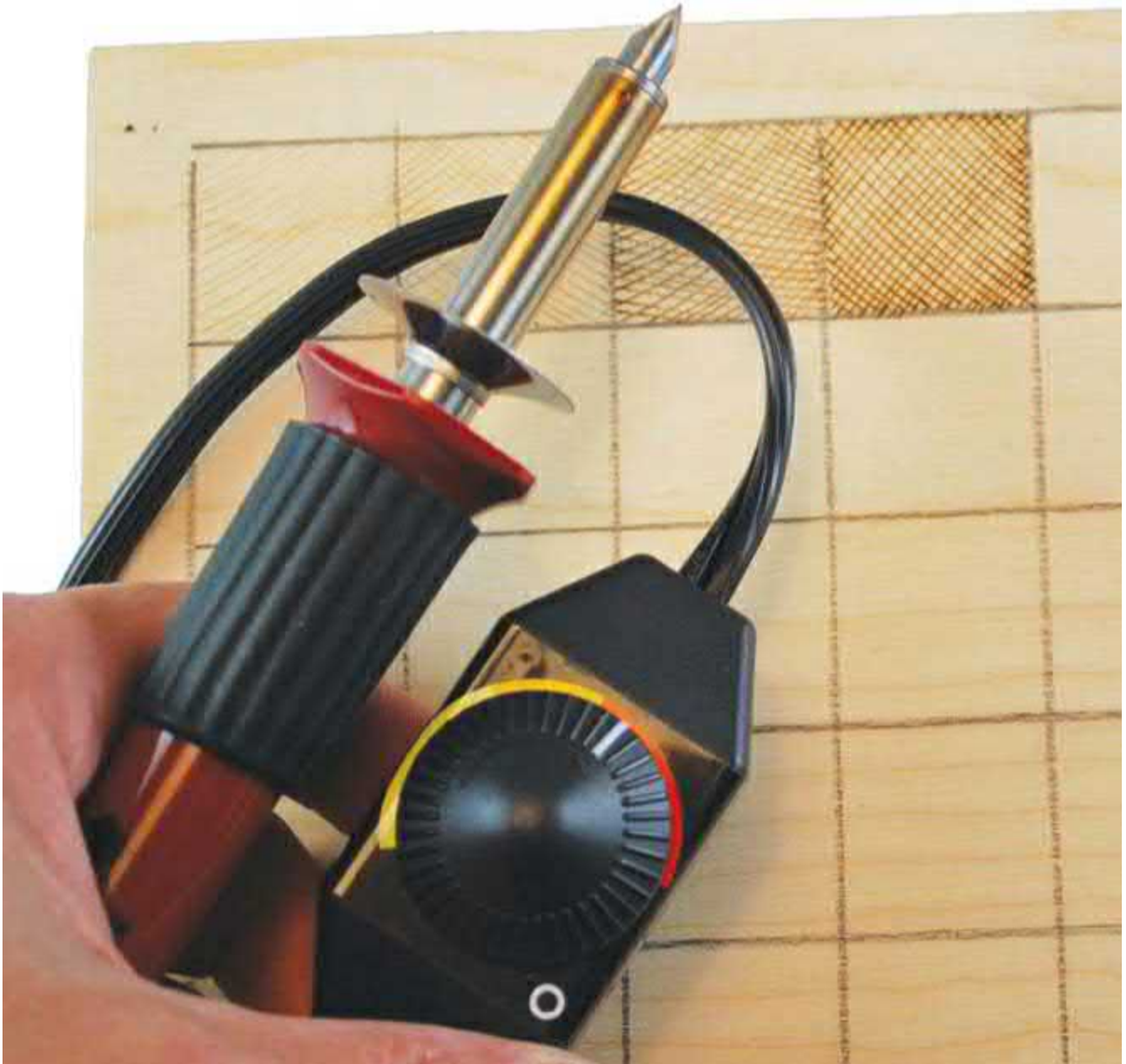


Figure 1.4. The rheostat control on the cord of this burning unit allows you to adjust the heat settings from very pale, cool tonal value burns to the purest hot black lines.

Create tonal values with this system by controlling the pressure of the tip on the wood, the speed of the stroke, and the density of the lines burned, as well as by adjusting the rheostat temperature settings.

Variable-Temperature Tool

Variable-temperature systems have a dial thermostat that allows you to control how cool or hot your tip is. You can adjust the temperature setting quickly, making it easy to control the tonal values in your project. This style has two types of pens: the fixed-tip pen, where the tip is permanently set in the hand grip, and the interchangeable pen, where different wire tips can be used with the hand grip.

Because the temperature controls for variable-temperature tools are separate from the burning pen, the pen handle shapes are thin, lightweight, and easy to grip for long-term burnings. A long cord from the control unit to the pen gives you free movement of your pen as you make your burning strokes (see **Figure 1.5**).



Figure 1.5. For the projects and practice board shown in this book, I use a Walnut Hollow Creative Woodburner. It's a variable-temperature tool with four interchangeable pen tips.

Woodburning pen tips

Variable-temperature pens come in two varieties: fixed-tip pens and interchangeable-tip pens. A fixed-tip pen has the burning wire permanently set in the pen (see **Figure 1.6**). Interchangeable pens allow different tip styles to be inserted into the end of the pen. Interchangeable pens often allow you to purchase a wider variety of burning tips, a great advantage to the new pyrographer.



Figure 1.6. The burning tip is permanently attached to the pen handle for fixed-tip pens.

Tips come in many shapes and bends, from the tight bend used in the standard writing tips to half circles that can create fish scales. Even square tubes make a textured pattern, which you can test on your practice board. Each pen tip creates its own width and shape of line burn; therefore, each is more suitable for specific textures (see **Figure 1.7**). Thin-edged spear tips or curved shader tips cut thin, deep lines. Loop tips and ball tips burn thick, shallow lines.

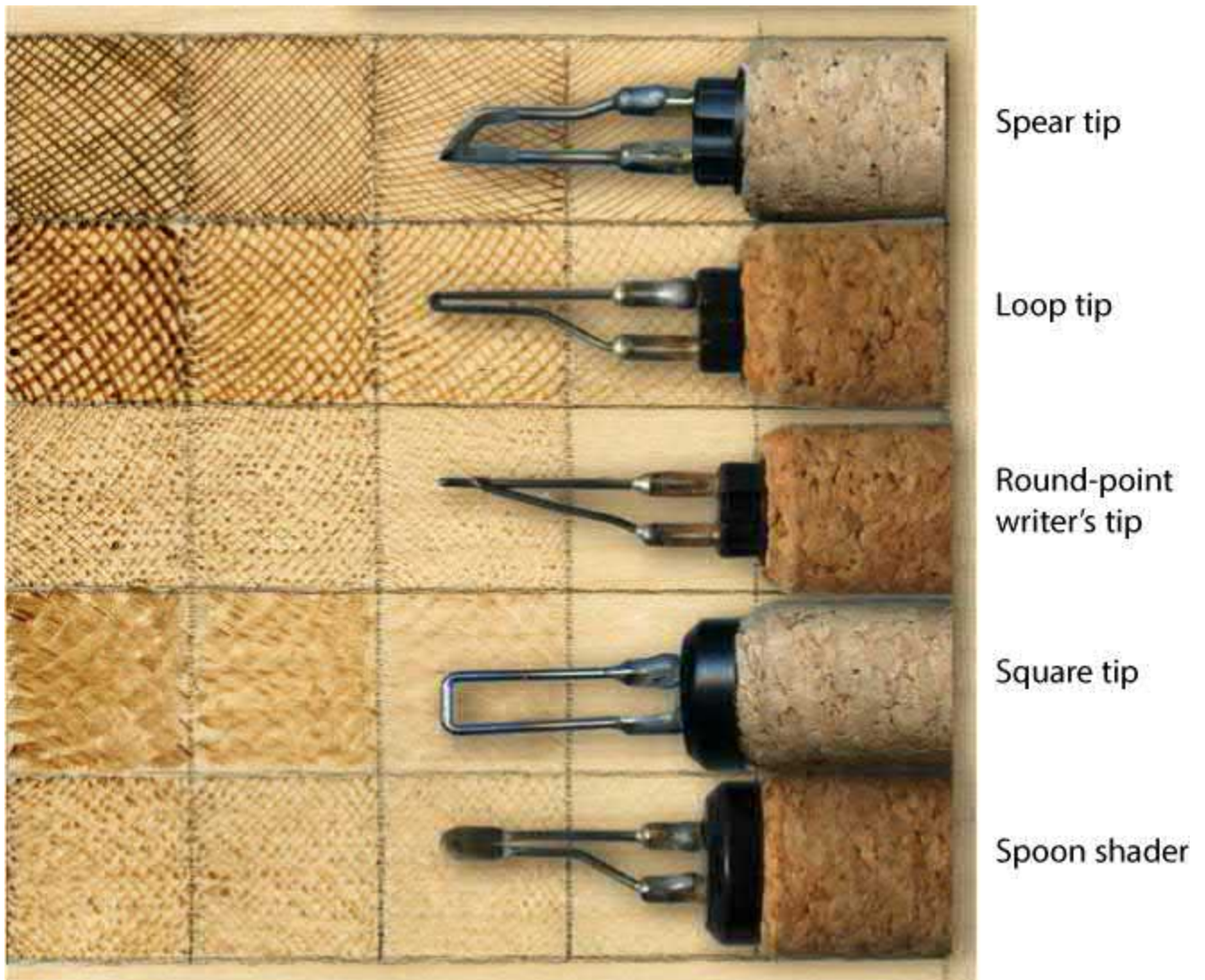


Figure 1.7. Each tip profile creates its own distinct burning stroke. A practice board (discussed in Part Two) is a great way to discover how you can control each pen tip burn.

I use four basic tools throughout this book: the loop tip, ball tip, spear shader, and spoon shader. These are the four snap-in, interchangeable tips that comes with the Walnut Hollow Creative Woodburner® (see **Figure 1.8**).



Figure 1.8. Each manufacturer has their own names for the pen tip profiles. In general you will use a loop tip, curved

spoon shader, ball tip, and flat spear shader.

A basic beginner's set of tips may include a tightly bent loop writing tip, a ballpoint writing tip, a flat spoon-shaped shader, add a curved-edge spear shader. These tips will burn any pattern or project in this book. Specialty tips can be added as you discover your style of burning. Tip shapes and names vary depending on the manufacturer of your burning unit and are often offered in several sizes. Check their website to see what tips are available for your pen.

Each manufacturer creates their pens to specifically fit the electric voltage, wire, and connections used in their woodburning units. Although some manufacturers sell conversion kits that allow you to use another manufacturer's pens on their heating unit, I do not recommend this practice. Using another company's pens can void your warranty and damage both your pens and your burning unit.

When purchasing your variable-temperature unit, consider the power features of the unit, the pen construction, how the pens connect to the unit, the guard grip construction, and the variety of tip profiles available for your unit.

Other tools

In addition to your woodburning tool, there are several other items you will want to gather into your woodburning kit before you start your first project (see **Figure 1.9**).



Figure 1.9. Some of the items you'll need. From left to right: scissors, bench knife, compass, #2 or softer graphite pencil, fine-point permanent marking pen, white erasers, and an architect's erasing pad.

Foam-core emery boards, 200- to 250-grit sandpaper, and silicon carbide cloths all serve several purposes in woodburning kits. They are used to keep your tool tips of the one-temperature tools clean from carbon build-up, which we will discuss in *Cleaning Your Tips* here. Finer grade sandpapers or emery cloths give a smoother polish to your tip, which ensures more even, consistent heating for your burned lines. *A leather strop and aluminum oxide honing compound* will also work to keep your tool tips clean. Regardless of what type of tool you choose, you will also be using sandpaper to prepare the wood surface for the pattern tracing and to sand lightly after the burning is completed.

What you'll need

- Ceramic tile or wood palette
- Cardboard
- Long quilter's straight pins
- Canvas stretchers
- Several grades of foam-core emery boards
- 200- to 320-grit sandpaper and/ or silicon carbide cloths (emery cloth)
- Leather strop and aluminum oxide honing compound
- White artist's eraser, gum eraser, and/or architect's eraser pad
- Graphite pencils, #H to #2B hard pencil through #4B to #6B soft pencil
- Masking tape, transparent tape, or low-tack painters' tape
- Small screwdriver (for variable-temperature tools)
- Needle-nose pliers (for one-temperature tools)
- Small round woodcarving gouge, bench/utility knife, and/or X-Acto knife
- Lint-free cloths, large drafter's dusting brush, and/or old toothbrush
- Metal ruler or straightedge
- T-square and/or 90-degree drafter's triangle
- Vellum tracing paper or onionskin tracing paper
- Artist-quality colored pencils
- Artist-quality watercolor paints and brushes
- Artist-quality oil paints and brushes
- Polyurethane spray sealer, tung oil, or Danish oil finish
- Paste wax

A *white artist's eraser* is excellent for removing the pattern tracing lines and guidelines that you will use during the burning work. Avoid using erasers that are colored, such as the large, pink, office-supply style. These erasers can leave their color behind on the wood. The colored streaks are permanent and require sanding to remove them. *Architecture eraser pads* are also excellent for cleaning graphite, pencil rubbings, pencil lines, hand dirt, and even fine fibers that may have risen from the burning process.

A variety of *graphite pencils*, from a #H to #2B hard pencil through a #4B to #6B soft pencil, should be added to the kit. The harder grades of pencil, #H to #2B, are used for tracing the pattern lines. Soft pencils, #4B to #6B, can be used to coat the back of your pattern to create graphite tracings. Throw a roll of *masking tape* and *transparent tape* into the kit to secure the paper patterns to your board.

Tool tips need to be changed during the burning work. For variable-temperature tools, a *small screwdriver* will do the job. One-temperature tools will require a pair of *needle-nose pliers*.

A *small round woodcarving gouge* is great to have handy. We all make mistakes. Sometime during a woodburning you will invariably burn the wrong area or burn an area too dark. Using a small round woodcarving gouge, you can gently carve away the incorrect burning, lightly sand to remove any marks left by the gouge, and then re-burn that area correctly. *Bench knives* or *X-Acto knives* can be used to carefully carve away small mistakes and to cut fine highlight lines into an area that has already been burned. Some woodburners also use them as scrapers to clean their tool tips.

Large dusting brushes are excellent to remove the dust created during the preparation stage of sanding your wood surface. *Old toothbrushes* can also be used; they also are useful in removing any excess rouge from your tool tips when cleaning them. *Lint-free cloths* are also useful during these steps.

For guidelines and pattern placement, you will need a *metal ruler* or a *straightedge* plus a *T-square*

and/or a 90-degree drafter's triangle. My kit includes all of these. Choose a metal ruler, not plastic, so you can use it to guide the woodburning tool as you work. (**Note:** Plastic rulers and the plastic edges of a T-square can melt if used as a tool guide.) An artist's straightedge has an advantage over the common ruler because it does not have the measurement marks along the edge. This allows the woodburning tip to glide smoothly along that edge without catching or wobbling because of the measurement indents. Many straightedges come with a thin layer of corkboard on the bottom, which prevents the straightedge from sliding or moving when in use. If you do use a measuring instrument to help you burn straight lines, remember that they will decrease the temperature of your tool tip, so you may need to repeat the burned line several times. Drafter's triangles are especially handy for checking traced lines that meet at square angles, such as a barn wall and roof joint area. Because they are made from transparent plastic, you can see your pattern lines through the drafter's triangle. For longer square angles and for proper placement of the pattern on a wood board, use the T-square. The T of the T-square can be placed along the side or edge of the wood board, and the pattern lines can be adjusted using the ruler leg of the T-square, ensuring that your pattern is properly squared to the board.

To transfer your pattern onto the wood surface, you will want either *vellum tracing paper* or *onionskin tracing paper*. I prefer vellum paper because it has the same transparent qualities found in onionskin paper; however, vellum is readily available in large sheet sizes. Transferring a pattern with onionskin paper can require several sheets taped together.

Artist-quality colored pencils are often used to add colored details to a finished work. There are two grades of colored pencils available on the market today: student grade and artist grade. Student-grade pencils have a high content of pigment and wax as their base. This can cause a cloudy or milky effect that will block out all of your woodburning work. Instead, invest in a set of artist-quality colored pencils. These have a much smaller pigment and wax content and are more transparent. Many artist colored pencils are also lightfast. Because colored pencils can be mixed by laying one layer of color over another to create new hues, a set of 12 or 24 pencils will do excellently. Artist colored pencils are available in three styles: dry colored pencils, oil colored pencils, and watercolor pencils. Which style of colored pencils you choose depends upon your wood preference and coloring style. Dry colored pencils are used to fill in the coloring in each area and have a somewhat transparent look. Oil colored pencils are similar to oil pastels and build up in the woodburned texture quickly. They are applied dry, but, because of the oil content, they can be blended with the use of a blending tortillon or a small oxen-hair brush. Watercolor pencils are also applied dry. Once the color coverage has been achieved, you can use a soft sable brush and water to moisten the colors for blending and shading, exactly as you would when using watercolor paints.

If adding paint to a finished burning, you will need a paint palette, water pans, and the thinning media that fits the type of paint you have chosen to use. *Artist-quality watercolors* and *oil paints* are used as coloring agents. Watercolors, which are available in either tube or cake form, are most often used on woods such as basswood and pine, where they can soak into the fibers of the wood. They are extremely transparent, allowing all of your woodburning tonal values to show through the coloring, and are easily blended to create new colors and shading tones. *Soft sable brushes* are used to apply watercolors, and a glass tile or plate makes a good palette. Oil paints are used for harder woods, such as birch, maple, or walnut, and can easily be blended for new hues. Mixed with turpentine and linseed oil, oil paints can be made into very transparent glazes that work wonderfully to add coloring. When glaze painting with oil paints, use soft sable brushes. Both of these types of artist colors are available in sets of 6 to 12 basic colors.

When working on cotton canvas, use several sheets of heavy cardboard and *long quilter's straight pins* to secure the cloth. This ensures a tight, non-moving surface. *Canvas stretchers* can be purchased at

your local art store to secure large pieces of canvas fabric.

Polyurethane spray sealer, tung oil or Danish oil, and paste wax are great for sealing woodburnings. Polyurethane spray sealer works well for woodburnings with color because the spray does not disturb the color. Tung oil and Danish oil provide a very hard finish and help to bring out the natural beauty of uncolored woodburnings. Paste wax creates a soft-looking sheen over uncolored woodburnings.

Cleaning your tips

The best burned strokes are made with a clean, bright tip. Therefore, it's important to know why they get dirty, when to clean them, and how to do so.

As you burn, the tips of your pens will begin to collect resin residue from the wood sap and carbon build-up from the burned wood. The tips can become so coated with carbon that they take on a black, crusted finish. That black carbon can even be transferred to your project, appearing in long, thin dark gray streaks on the work. Carbon can cause your tip to lose heat or to create uneven distribution of the heat to your tip.

I use two methods for cleaning my pen tips: emery cloth and a woodcarving strop with aluminum or yellow oxide rouging compound (see **Figure 1.10**). I also clean my tips often, long before the carbon build-up becomes too intense.



Figure 1.10. Materials needed for cleaning woodburning pen tips. From top to bottom: yellow oxide rouge, tanned leather, raw leather, heavy kraft paper, emery cloth, newspaper, and fine steel wool.

The first important step in cleaning your pen tips is to unplug your burning unit and allow the pen to fully cool. A hot pen tip can burn both emery cloth and leather stropps.

A 1500-grit or finer emery cloth, which can be purchased at your local hardware store, can be used to clean badly encrusted tips. Fold the emery cloth into quarters, small enough to secure all sides with your fingers. Gently pull the tip of the pen over the cloth. Use as little pressure as possible as you clean the tip to avoid distorting or bending the wire. I also use this method on my one-temperature brass tips.

Fine-grit steel wool also works well for your interchangeable brass tips and can return those tips to the bright yellow-orange color of the metal.

For wire tips, I use a leather or synthetic woodcarving strop. The strop is first prepared with a coating of either aluminum oxide powder or a fine-grit rouging compound. Rouging compounds are available in a range of grit sizes, each noted by a different color. The photos above show yellow oxide rouging compound, but you can use any compound that you have on hand. The tip is pulled across the strop using gentle pressure until the tip returns to its bright color of gunmetal blue (see **Figure 1.11**). Work your tip over the raw-leather side first, then polish the tip on the tanned-leather side (see **Figure 1.12**).



Figure 1.11. Yellow oxide rouging compound has been added to the raw side of this leather scrap. This will help remove the carbon build-up on wire-tip pens.



Figure 1.12. Turn your leather scrap over. Working on the tanned-leather side without rouge will brighten the polish on your tip.

End either style of cleaning with a brightening of your tips using heavily printed newspaper or heavy-weight brown kraft paper. After your pen has been brightened, wipe it and the pen shaft with a clean, dry cloth to remove any remaining carbon particles. You are ready to return to your project.

Woodburning Media

Any natural surface can be used for pyrography, including wood, gourds, papier-mâché, cotton and linen cloth, watercolor paper, and vegetable-tanned leather.

Avoid any material that has been chemically treated or painted because the high temperatures of the pen tips will release the chemical fumes of these materials during the burning process. Avoid using any media of “unknown origins,” such as palette wood or unidentified scrap wood because you have no knowledge as to what treatments it may have been subjected. Avoid any material that has evidence of mold, mildew, or water damage as all of these can cause health problems with contaminated fumes.

Wood

Soft woods, such as basswood and poplar, develop dark tones at low temperatures. This means you need to watch your temperature settings so that you do not go too quickly to very dark tones. Mahogany tends to burn at a medium temperature range. Birch and black walnut need hotter temperatures. I don't recommend using black walnut because the smoke can be toxic for some people.

The natural color of the wood affects the value range that you can see in your burning (see **Figure 1.13**). Obviously, white woods like poplar and basswood are going to show a very wide range of value burns, even when they are pale. African mahogany and black walnut probably will not show burn lines until you reach a mid-toned or dark-toned burning.



Figure 1.13. The natural color of your wood species will directly affect the range of tonal values you can burn.

Premanufactured objects, such as wooden boxes, plaques, or canisters, can be purchased at larger craft stores and supply houses. As your skill in woodburning grows, you can also consider using unfinished furniture as your work surface. Whichever wood or surface you chose, please consider basic safety procedures. Do not burn any surface that has been painted, sealed, or oiled. Safe woodburning is done on raw, untreated wood only.

Leather

Leather is an extremely versatile surface for any pyrography project. It can be cut into any shape to create wallets, book covers, bags, and even saddles. Leather also can be molded and sculptured. Precut-leather kits that include tools, needles, lacing, and instructions are available through leatherwork supply houses. You can also purchase leather in half-side hides ready for you to cut into your own leather-craft project (see **Figure 1.14**).



Figure 1.14. Pyrography projects that use leather can be especially satisfying because it has a wide array of uses. A custom sketchpad is a fun project for any artist!

There are several methods to tanning leather. Vegetable tanning is the safest method to use for woodburning. Avoid leathers that have distinct textures, brightly dyed colors, or rough suede surfaces.

Leather burns quickly and easily at low temperature settings. In the higher temperature range, you can develop strong dark tones and even use your woodburning tool tip to sculpt the leather surface, creating a three-dimensional look to your work.

Gourds

Dried gourds with their densely packed wood-like fibers provide interesting shapes for pattern decoration. Easily cut, the gourd can become a bowl, sand candleholder, vase, lamp, and a delightful bird house (see **Figure 1.15**).



Figure 1.15. Gourds can be particularly challenging to work with because of their spherical shape. Be extra careful when placing the pattern on the surface, and adjust the image to what suits your eye.

Not all gourds come pre-cleaned and you may need to remove the skin from the surface. As the gourd dries, the skin becomes black with mold. Wear a dust mask whenever working the preparation steps. Latex or rubber gloves will protect your skin from the dust. Soak the gourd in a warm water bath that has several tablespoons of Clorox® added. Depending on how thick the skin layer is, this bath may take up to 30 minutes. Roll the gourd often to ensure an even layer of water on the outside.

With a plastic kitchen scrubby, gently work the skin off. I often find that I need to soak then scrub several times to remove this entire layer. When you have the shell area exposed, allow the gourd to dry well. You are ready to cut the gourd with a sharp bench knife, a wood carving tool, or a strong utility knife to scrap out the seeds from the inside.

Cotton fabric

Cotton canvas items, such as totes, book bags, and aprons, can be added to your idea list when considering your next project. A fabric burning can create tonal values from very pale, soft browns to dark russet tones (see **Figure 1.16**). Any cotton fabric can be woodburned, but the thickness of the canvas weave makes it the ideal fabric. Woodburn designs also work on pale-colored cotton blue jeans.



Figure 1.16. I kept my burn lines light on this book-bag to allow the additional colors to pop. However, you can create a wide range of sepia tones on canvas, just as on wood, leather, gourds, and paper.

Any fabric should be prewashed to remove any sizing or starch. Blot off the excess water with a thick towel so that your project is slightly damp. Stretch the fabric over several layers of cardboard, pinning it in place with long quilting pins. When the fabric completely dries, it will be pulled taut to the cardboard,

making it easy to work on.

Artist paper

Artist papers with rag content come in several styles and weights. You can find papers with a variety of surfaces, from light texture (smooth tooth) up to a deep pebbled texture. For woodburning, a smooth or light texture works well. Pebbling can distort your lines as you burn. Paper weight ranges from 90 pounds to over 300 pounds; the higher the weight, the thicker the paper (see **Figure 1.17**).



Figure 1.17. Artist paper is inexpensive compared to wood or gourds, easily framed when finished, and perfect for adding watercolors over the burned work for a fully decorated piece.

Watercolor pads or blocks are perfect for pyrography. Paper up to 22" × 30" (56 × 76cm) is stacked then glued along the four outer edges, making the stack into one strong board. As you work, the paper cannot buckle under the heat of the pen. When the burning is finished, the top paper that you have worked is cut free from the block and the next paper on the block is ready to use. You can also find precut greeting cards and envelopes in rag content watercolor paper that make wonderful presents.

Papier-mâché is a favorite woodburning surface for me. Made from shredded craft paper and glue, the papier-mâché can be pressed into a wide variety of shapes, from flowerpots, kitchen canisters, gift boxes, and even scrapbook covers. It is inexpensive and requires no preparation steps.

Sanding the Wood Blank

Your wood surfaces need a smooth surface for burning, so you must give them a light sanding. Use fine-grit paper, 220 to 320 grit, to remove the fine ridges and loose fibers on the wood (see **Figure 1.18**). Coarser sandpaper, lower than 220 grit, can leave sanding lines that will affect the quality of your burn lines. Even fine ridges will cause your tool tip to skip or move as you pull the stroke, resulting in uneven or non-straight lines.

What you'll need

- Sandpaper (220 to 320 grit)
- Sanding pads
- Foam board fingernail files
- Heavy brown kraft paper
- Lint-free cloth



Figure 1.18. Keep a stockpile of assorted sandpaper grits and assorted sanding materials for your woodburning. A nail file is a surprisingly useful item for reaching into the nooks and crannies of unusual wood formations.

Sanding pads have a foam core and are flexible, making them great for curved surfaces, such as a wood plate or the routed edge of a plaque. Available at your local drug store, foam board fingernail files are a nice addition to your tool kit. They come in a variety of grits and are excellent for working deep, carved detail areas of a wood shape. Foam nail files can also be used to clean your one-temperature brass tips.

Begin with your coarse sandpaper and work through to your finest. Remember that sandpaper grit is coarser the lower the number and finer the higher the number. For any sanding device or tool, always work with the grain of the wood to avoid creating fine scratches in the surface. For a circular piece of wood (see **Figure 1.19**), the wood should be sanded in a circular motion to match the rings of the end-grain slab.



Figure 1.19. The smoother your wood surface, the finer and straighter your detailing lines can be. Always sand with the grain of the wood, using progressively finer-grit papers. End with a good polishing of the wood surface using heavy kraft paper.

Heavy brown kraft paper from a grocery store paper bag makes an extremely fine-grit sanding tool and is often my final sanding media. Remove all the sanding dust with a clean, lint-free cloth before you begin your next steps.

Transferring a Pattern

There are two methods of transferring the design to your work surface: graphite paper or a graphite pencil rubbing to the back of your pattern paper. Graphite paper can be bought from a craft store. Pencil rubbing is a technique where you use a soft lead pencil to blacken the back of your pattern paper. Here you are creating your own graphite and do not need to deal with several paper layers.

Of the two, I use **graphite paper**, with its pale gray lines, on gourds, papier-mâché, and darker woods. For working on basswood, poplar, or birch, I prefer the **graphite pencil rubbing method**.

The steps for each method are very similar. When transferring a pattern to a standard flat and rectangular object, follow the steps below. In the rest of this section, I will take you through more detailed explanations of how to handle irregular objects.

The media you have chosen is laid under your paper pattern so that the transfer side (the graphite side) is against your work surface (see **Figure 1.20**). Tape the pattern paper down in several places. Use a pen to trace the pattern on the surface of your pattern paper.

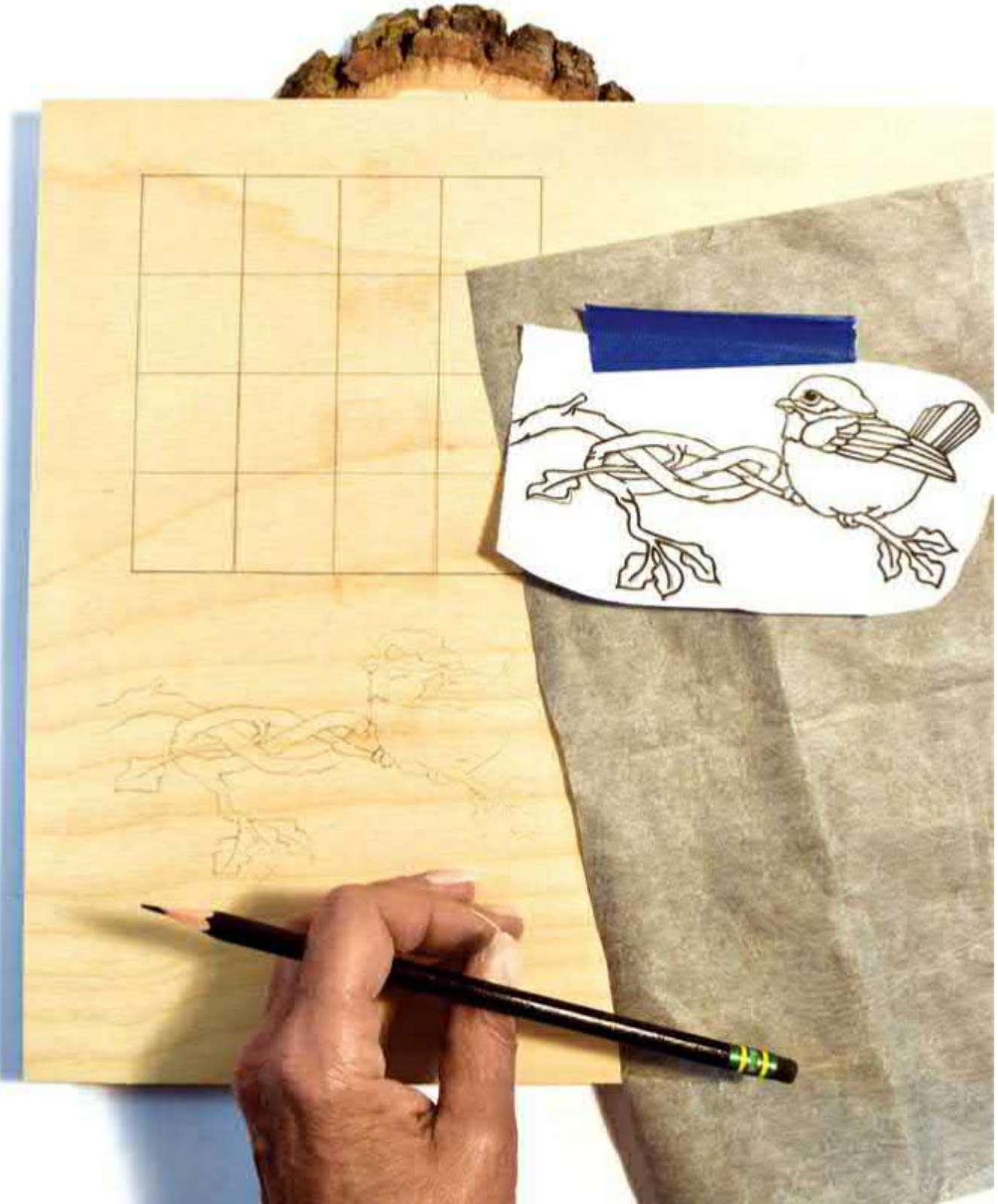


Figure 1.20. The great advantage of using graphite paper is that it can easily be erased after the burning is complete.

As you trace the lines of your pattern on the pattern paper, the graphite on the back of the paper leaves a fine line on your work surface. Both tracing papers should be used carefully as they cannot be easily removed from your work surface after the burning is complete.

What you'll need

- #2 to #6 pencil
- Pen
- Graphite paper
- Ruler
- T-square
- Transparent tape or painter's tape

Tracing on an irregular shape with graphite paper

Wood, cut leather, and especially gourds do not necessarily come in a perfectly square shape. In this sample the pattern is being traced to a live-edge, oval basswood slab that is very irregular in its dimensions.

Begin by determining which edge of the oval you want at the top of your project and which edge will therefore become the bottom. Position the board on your worktable accordingly.

With a ruler and soft #2 pencil, mark a pencil line vertically across the board as your center reference line. Measure and mark the center point of this line with your pencil to find the center point of the horizontal line.

Place a square-edged form, such as a notepad, against the vertical line with the top of the notepad touching the center point you just made. Make several pencil marks along the top of the form. This gives you two or more points to position your ruler against to create the horizontal line (see **Figure 1.21**).



Figure 1.21. Create vertical and horizontal lines with a ruler and other square-edged materials you have at home. Drawing a level line on any surface is made easy by measuring spots on either side of your center point.

Hold your printed pattern up to a light source so that you can see through the paper. Fold the pattern into quarters, matching pattern lines of both sides to each other and on the top and bottom to each other. This will ensure you find the center of the pattern, which may not always be the center of the paper. Crease the paper with your fingers along the fold lines.

Match the fold lines of the pattern paper to the pencil guide lines on your board (see **Figure 1.22**).

Use transparent tape or painter's tape to secure the pattern paper to the surface.

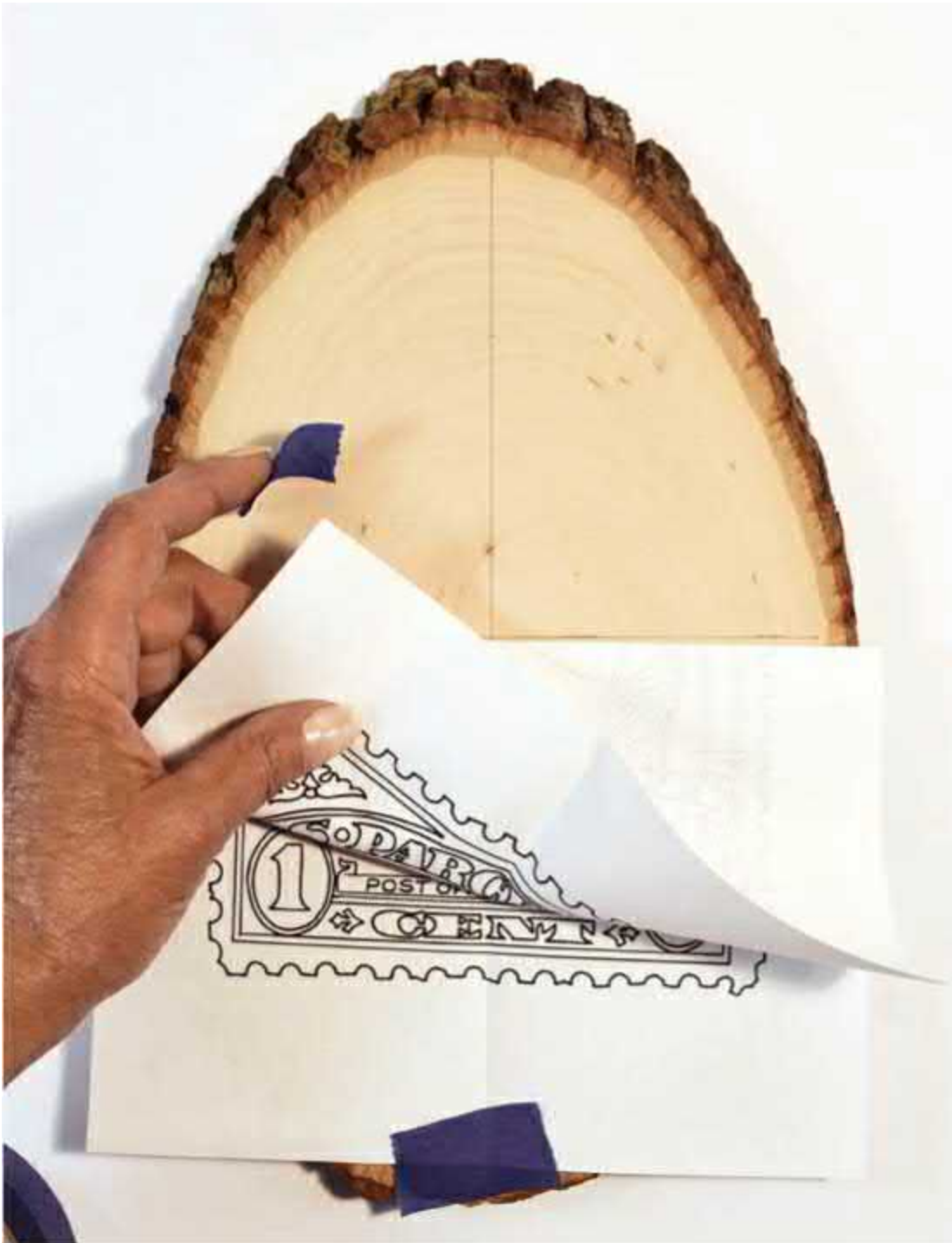


Figure 1.22. Fold your pattern paper into quarters, making sure it's the center of the pattern and not the center of the paper. Line up those crease lines with the lines you drew and tape the paper down.

You can now slide a piece of graphite tracing paper under your pattern paper with the graphite side against the wood (see **Figure 1.23**). Using a hard #H pencil or ink pen, trace over the pattern lines. When you remove the pattern and graphite paper from your board, you will have a soft gray pattern on the wood (see **Figure 1.24**).

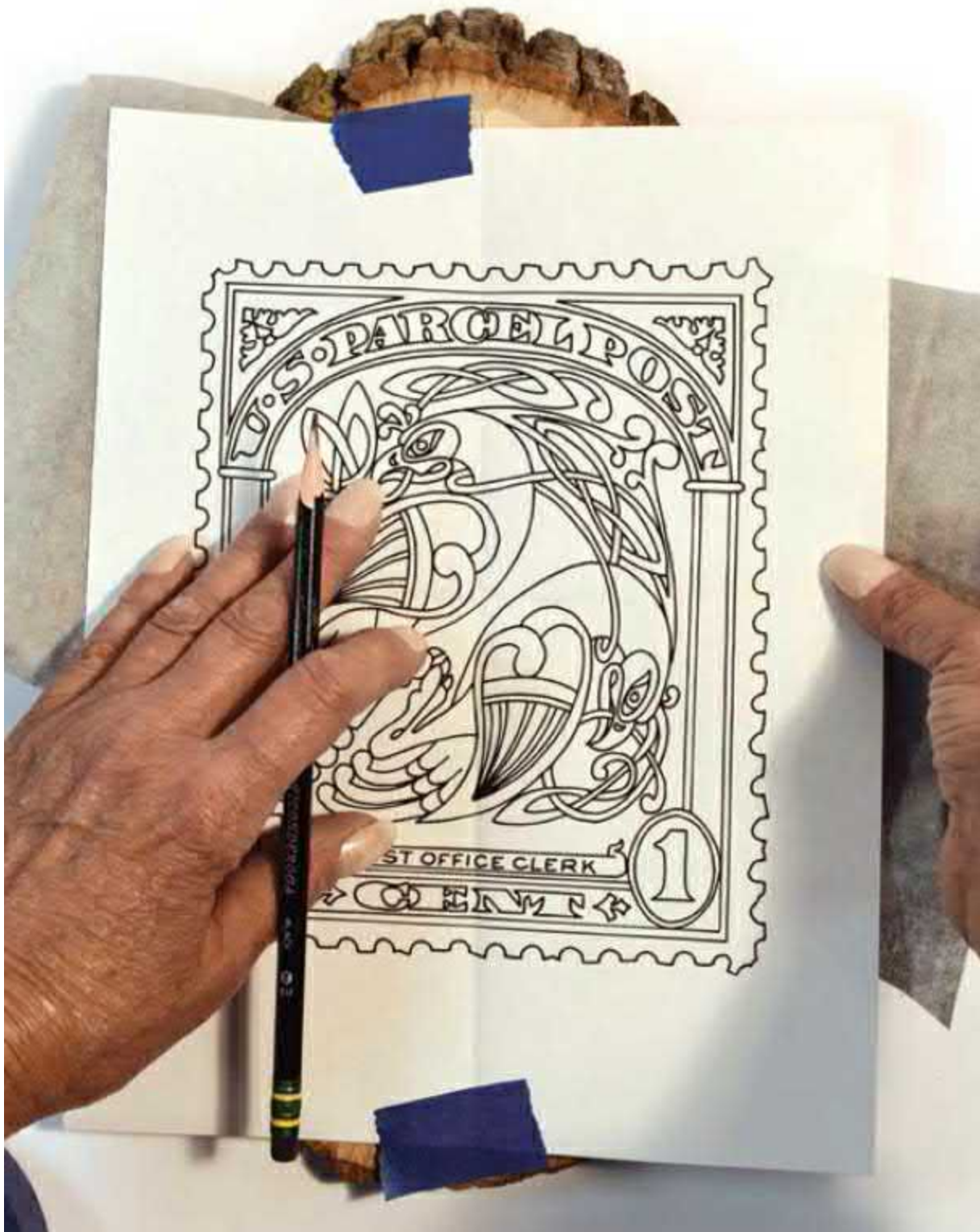


Figure 1.23. Slide the graphite paper between your pattern paper and the wood, graphite side down. Trace the pattern lines using a pen or hard pencil. If the pattern is complex, I recommend only tracing the main lines and saving the details for a later pass.



Figure 1.24. Tracing the pattern on the graphite paper will leave behind light gray lines. Check that everything you meant to trace is there by lifting only one piece of tape. If you missed a spot, this makes it easy to return the pattern to the correct spot.

Tracing on an irregular shape with pencil rubbing

Begin by determining which edge of your board will become the top of the project and which will be the bottom. Position the media on your work surface accordingly.

For my sample, I have placed the board on a ruled cutting mat with the top edge aligned with one of the horizontal-ruled lines (see **Figure 1.25**). The top and bottom edge of this board are not square to each other. Notice how the bottom edge begins to cover the mat numbers on the right side. Since my

board is not square cut on both edges, I will align the pattern to the guideline marks on the top edge only.



Figure 1.25. Arranging one side of your media to a straight line can be a solution in deciding where to place your pattern.

Generally position your pattern paper onto the board and determine where you want the center of the pattern to fall on that board. In this sample I have placed the pattern high on the board, $\frac{1}{2}$ " (1.3cm) from the top edge, which allows space for cup hangers under the burning.

Since the sides of this board are also irregular, adjust the pattern to allow an even amount of space on

both sides of the paper.

Blacken the back of your pattern paper with a soft #2 through #6 pencil, covering the back completely (see **Figure 1.26**). Place the pattern onto your work surface and align the pattern to the top of the board using a T-square or ruler (see **Figure 1.27**).



Figure 1.26. Use a soft pencil to fill in the back of the pattern paper. This will create enough loose graphite to transfer the tracing onto your chosen media. If your pattern doesn't fill the entire page, you only need to fill in anywhere where you will be tracing.



Figure 1.27. Take care to arrange your pattern paper exactly where you want it. Use a ruler to check that the paper isn't on a slight angle.

Trace over the pattern lines using a hard #H pencil or ink pen. This will leave a fine line of pencil graphite on your work surface (see **Figure 1.28**). The pencil lines can later be removed with a white artist eraser (see **Figure 1.29**).



Figure 1.28. Tracing with this method will leave faint gray lines. While the pattern will be less clear than if you used graphite paper, pencil rubbings are much easier to erase.



Figure 1.29. *Celtic Bird* shows that you can always add more detail during the burning process. Even if the pattern is simple, your piece doesn't have to be!

Pattern realignment marks

I recommend tracing only the necessary lines when first transferring a pattern to your media surface. This means that there will be times when you will need to add more detail from your pattern by tracing a second time.

Your first tracing may only need the outlines for large, general areas that will be shaded before you work any detail lines. There is little point to tracing those detail lines initially, as shading tonal values will cover them up.

After the first tracing but before you lift your pattern from your surface, use scissors to cut several reference areas along the edge of the pattern paper. My cuts are made on the top right and bottom left corners of the pattern. With a soft #2 through #6 pencil, make several pencil guidelines at these reference areas, moving the pencil from the paper onto your burning surface (see **Figure 1.30**).



Figure 1.30. Cut into your paper where it won't interfere with the pattern but some of the wood surface is showing.

Draw lines that start on the paper and continue onto the wood. This will make it easy to place the pattern paper exactly where it was before.

When you want to add more tracing lines, simply realign the pencil marks on the pattern with those left on the wood. Tape the pattern back down to the wood and you will have your pattern in the exact position where it laid with the first tracing.

Finishing Steps for Woodburning

Careful consideration of what finish to apply to your final piece is essential. You want the burned texture to show through the finish, not be covered up by it. Following are several finishing techniques that I use frequently because they result in exquisite finished woodburnings.

Sanding and erasing the finished burning

When your woodburning steps are completed, you will discover that the process of burning has left a fine, but rough texture to your work. If you rub your hand across any burning at this point, you will be able to feel the coarseness of the burned fibers that were raised during the burning process. Using very fine-grit sandpaper, lightly go over the entire work to remove this roughness. For this step, I use the foam-core emery boards in my tool kit. They can be laid flat against the wood board and gently moved across the wood without disturbing the burned design.

After the emery board, I use a white artist's eraser on the entire woodburned design. This removes any remaining pattern lines and guidelines from the work. Use a lint-free cloth or large drafter's dusting brush to remove the eraser rubbings and the sanding dust.

Adding color to your project

Once you have sanded the project and erased any pencil lines, you can add coloring over your work. Any coloring should be done before the final finishing coats of oil or polyurethane are applied. There are three different coloring agents that can be used: colored pencils, watercolors, and oil paints. Each has its own specific advantages.

Colored pencils work best when the woodburning has tight, intriguing details for coloring. The sharp point of the pencil easily fits into any area, no matter how small.

Watercolors are favored for softer woods such as basswood, butternut, and pine when you want strong but clear colors. Since they are totally transparent, watercolors will color an area of burning without clouding the woodburning strokes. On harder wood projects, such as those created on birch plywood, where you want that same strong, clear coloring, choose **oil paints**. The oil in these paints will penetrate the fibers of harder woods, whereas watercolors would float on top of the wood surface.

Colored Pencils

Mallard Drake was colored using artist-quality colored pencils (see **Figure 1.31**). For the best coloring effects, keep your pencils very sharp and develop each color slowly in thin, light layers. Because artist-quality colored pencils are semi-transparent, you can add layers of different colors, one over another, to create new hues and tones. Do not force the pencil tip into the burned crevices of the work; instead, keep the pressure gentle. This allows the high areas of the work to become colored while the shading tones of the burning show through the hues.

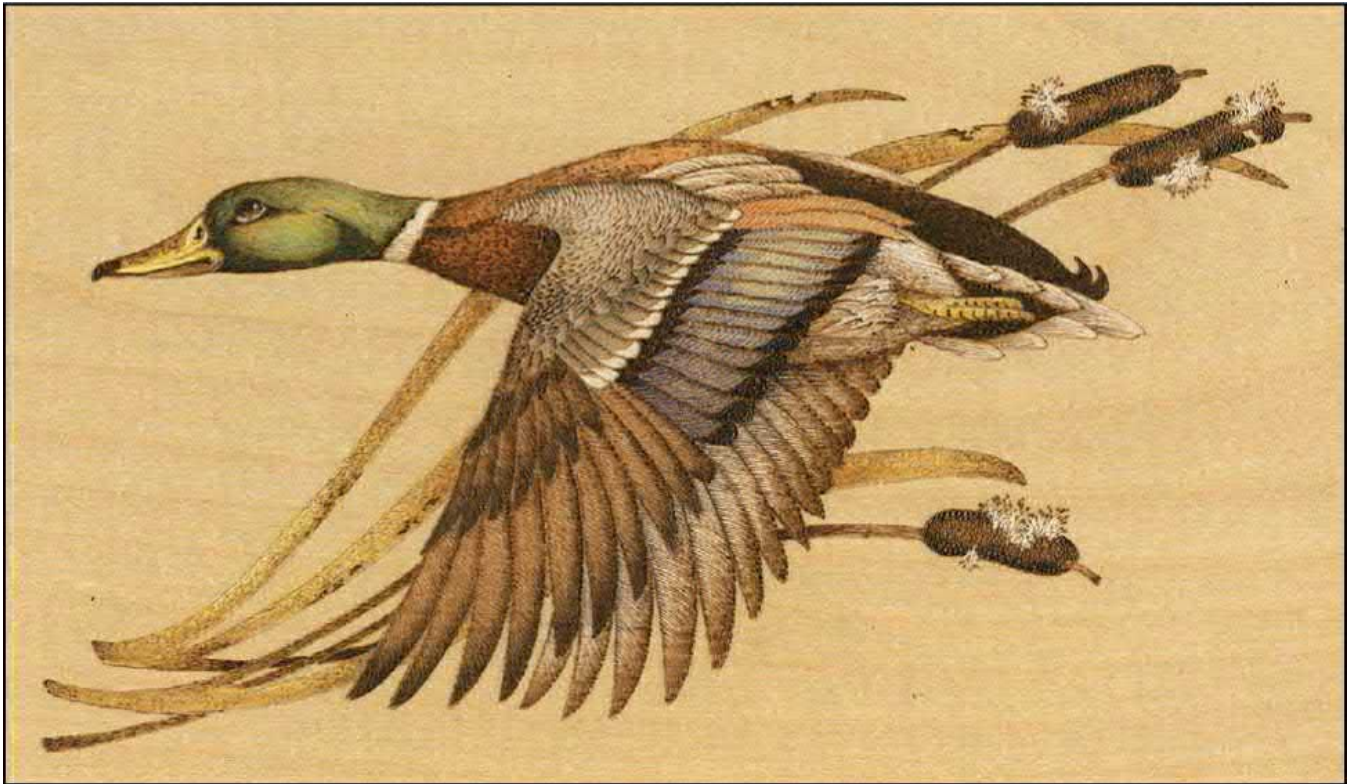


Figure 1.31. *Mallard Drake* was burned on a piece of white birch plywood that was extremely clear in grain, providing a clean background for the application of color.

Any errors or mistakes in your pencil work can be corrected using a white artist's eraser. Transparent tape can also be used to lift a color mistake. Lay the tape over the area that you want to lift; then, using a graphite pencil or an ink pen, gently rub directly on the tape over the error. When you lift off the tape, you will also lift off the pencil color.

Once you have the coloring in place, give your project several light coats of spray polyurethane. This will protect your wood surface as well as seal the colored pencil.

Watercolors

Watercolors are also favorite coloring agents for woodburners. *Old-Timer Fireman* was colored using watercolors (see **Figure 1.32**). These paints are transparent, allowing the woodburning shadows to show through the coloring. Woods such as basswood, butternut, and pine take watercolors excellently. Because soft woods are extremely porous, the water in the watercolors is pulled deeply into the wood fibers, taking the coloring agent with it. This deep penetration of the color gives you a rich, vibrant finish.



Figure 1.32. *Old-Timer Fireman* was colored with watercolor paints. The watercolors are transparent, allowing the burn lines to show through.

Place a small amount of each of your watercolors on a clean tile, and then add several drops of water to thin the paint. By keeping the early stages of coloring very thin, you can develop the color slowly by adding more layers of paint. Watercolors can be either mixed together on the tile to create new color shades or laid one color over another on the burning for new hues and tones. Allow each coating of watercolors to dry well before adding more color to that area.

When the painting is completed, allow the woodburning to dry overnight. Then, apply several light coats of polyurethane spray to the entire project to protect the wood and watercolors.

If *Old-Timer Fireman* had been woodburned onto a hard wood such as birch, oil paints would have been used for the coloring and should have given the exact same effect as the watercolors shown in the sample.

Oil Paints

As I mentioned earlier, hard woods, such as birch plywood, take artist oil paints very well. Here, the oil base of the paint penetrates the wood fibers, allowing the coloring agent to be set deeply into the wood

surface.

Place a small amount of your oil paint on a clean palette. In a small container, mix one part sunflower or linseed oil with one part turpentine. Use this mixture to thin your oil paints until they are transparent. Thin layers can now be applied over your woodburning, slowly building up the color tone (see **Figure 1.33**). Oil paint is an excellent medium to use when you need gradually blended color changes. Allow each layer of oil paint work to dry well before adding a new layer. For large areas of color, this can take from one hour to several days, depending on the wood species and color application.



Figure 1.33. Oil paints are transparent colors that allow the full depth of the woodburned tones to show. For the *American Eagle*, titanium white oil paint was added to the tips of the feathers to create a contrast to the black-brown color of the woodburning.

When the coloring is completed, allow the project to dry well. Again, this can take several days or more. Then, apply your finishing coats of polyurethane spray sealer.

Sealing the wood project

The lines and shading that you create with your pyrography tools do not require a finishing sealer; they are permanently set into the work surface. However, your working surface may need a finishing coat to seal the project from dirt, to give the completed project a shine, or to protect any color you have added to your burning.

Cotton cloth and paper projects usually are not sealed after the work is completed. Vegetable-dyed leather may need a waterproof coating of oil added. Wood often needs a sealer coat of spray sealer, brushed-on varnish, or oil finish.

Both **polyurethane and acrylic spray sealers** are readily available and easy to use. After any painting steps are completely dry, apply two to three light coats, allowing each coat to dry thoroughly (see **Figure 1.34**). This type of sealer coat comes in matte, semi-matte, and gloss sheens and does not change the color of your wood.



Figure 1.34. If using a spray sealer, make sure you always wear a mask and spray in a well-ventilated area.

An **oil finish**, such as tung oil, Danish oil, or a half-and-half mix of turpentine and linseed oil, gives a

soft sheen to your work (see **Figure 1.35**). Apply these oils following the manufacturer's directions. Dispose of any oil-coated rags or paper towel by submerging them in soapy water. Oil-coated rags are a fire hazard. Oil finishes darken the tonal value of the wood, and so will change or darken your pyrography work.



Figure 1.35. Oil finishes are popular because they penetrate the wood to enhance the natural grain. However, this method can sometimes darken pyrography work.

Brush-on polyurethane and varnish are also available for your pyrography project at your local hardware store. Follow the manufacturer's directions, allowing ample time between coats for thorough drying. Polyurethane does not change the natural coloring of your wood; some varnishes can give the wood a golden-yellow cast. Do a test sample on a scrap board to check the final varnish coloring before you work on your finished project.

Wood Patina

Wood naturally changes color with age and develops a darker tonal value, also known as a *patina*

(see **Figure 1.36**). White pine, which has truly clear, white coloring when freshly cut, becomes a deep golden-yellow within a decade. Birch and basswood, both common pyrography woods, darken to a soft taupe or beige-brown coloring.



Figure 1.36. Both landscapes have been burned on ¼" (6.3mm) birch plywood using the same burning unit and pen tips. The barn on the left is a recent burning. The church on the right was burned around 2001. Over the past two decades, it has developed a mid-tone orange patina to the wood.

As the wood ages, it can appear that your pyrography work is fading. If you have worked in the palest tonal values, these areas can become completely lost. The wood slowly darkens and overpowers your pale and pale-medium coloration. You cannot stop the wood from aging; however, you can take several easy precautions to minimize its effects (see **Figure 1.37**).



Figure 1.37. Woodburnings will darken because the wood literally rusts over time. The iron content of the wood causes a patina. Sealing your wood with a spray, oil, or varnish can protect the burning from an accumulation of dirt.

Part 2



Practice

That old adage about practice makes perfect is true. Before you start any woodburning project, you'll want to practice on a piece of scrap wood. In this chapter, we'll discuss the basic techniques of woodburning, like how to create light and dark tones and how to create texture. Then, I'll show you how to create a practice board and give you some exercises so you can hone your skills before you start your project. When you are comfortable with the techniques, we will delve into the theory behind woodburning to discuss tonal values and other ideas that will help you perfect your art.



Practicing Woodburning Pens and Tips

To a woodburning beginner, using a new tool and all the accessories that come with it can be daunting. The best way to get used to this craft is by testing your tools on practice boards. In this section, let's look at how to hold your pen, what the common pen tips do, and how to prepare for future projects.

Hand grip positions

Your grip on your burning pen is the same as your hand grip on any writing tool, such as a pen or pencil (see **Figure 2.1**). The pen is held below the burning tip between the thumb and index finger with a loose, comfortable pressure. The back of the pen handle rests on your middle finger, which is slightly bent.



Figure 2.1. The same four-point grip is used on your pen whether you are using the side of your pen tip or the point. Only the angle of your hand to the wood changes to lift the pen tip to its finest point.

Lift your hand from the wood; do not rest the side of your palm directly on the wood as this limits your ability to move smoothly over the pattern. Keep the side of your arm and elbow off the table. This lets your entire arm move during long strokes.

This is a four-point grip: thumb and index finger to hold, middle finger to rest the pen, and pinkie finger to anchor the hand on the wood and as a depth guide (see **Figure 2.2**).



Figure 2.2. One-temperature and rheostat burning pens have a much thicker handle because that handle houses the burning unit. Although your fingers are wider apart than when using a variable-temperature pen, you use the same four-point grip.

Do not over-grip or use a heavy hand with your pen. Light finger pressure is all you need to keep the pen in place and moving freely. If your hand becomes tired or sore as you work, you are probably over-gripping the pen.

Variable-Temperature Tool Techniques

Remember to keep these tips in mind to aid you in using the variable-temperature tool to your best advantage.

- 1. Mark your temperature setting numbers in pencil directly on the wood.** The numbers will remind you as you work which temperature setting you wish to use.
- 2. Densely packed line textures can be created in light or dark tones.** Because you have more control over the temperature, you also have more control over the darkness or paleness of the color tone. By using a low setting, dense textures can be created so that little of the unburned wood shows, yet the burn is extremely pale in value.
- 3. Develop your tonal values slowly through layers, not through heat.** Quick, hot burnings are not always the best for black areas in your design. There are many tones of color possible between dark brown and black. By developing the burning slowly through layers, you can choose which tone works best for each area.

One-Temperature Tool Techniques

Remember to keep these principles in mind as you woodburn. These simple tips will increase your success.

- 1. Pay special attention to the very pale areas of any project.** Mark these on your pattern to remember where those pale tones will be. When you plug in your tool, either to start a burning session or after cleaning a tip, it will begin heating. This is the time to burn the pale tones. As the tool reaches its hot temperature setting, move on to the darker areas of the work.
- 2. Use certain texture strokes to ensure pale tonal values.** Crosshatching is a favorite because it allows an equal amount of original wood coloring in the texture to balance out the burned lines. By adding more layers to the crosshatched texture, you can slowly develop the mid-tone values. Widely spaced curved-line texturing is another excellent burning stroke for the one-temperature tool.

3. **Apply a light pressure as you work.** The tool tip should slide or glide across the surface. Light pressure allows the sharp edge of the tool to do the burning work; heavier pressure pushes the tip deep into the wood, causing both the tip and the tip's sides to burn the wood.

Comparing Two Pyrography Systems

Here is a practice board that shows the tonal values of two woodburning systems. The two left columns were burned using a one-temperature tool. The universal tip was used for rows one through three and row five. The right two columns were burned using a variable-temperature tool. Rows one through three and row five were created using the loop tip. All the tips described in this example can be seen below.

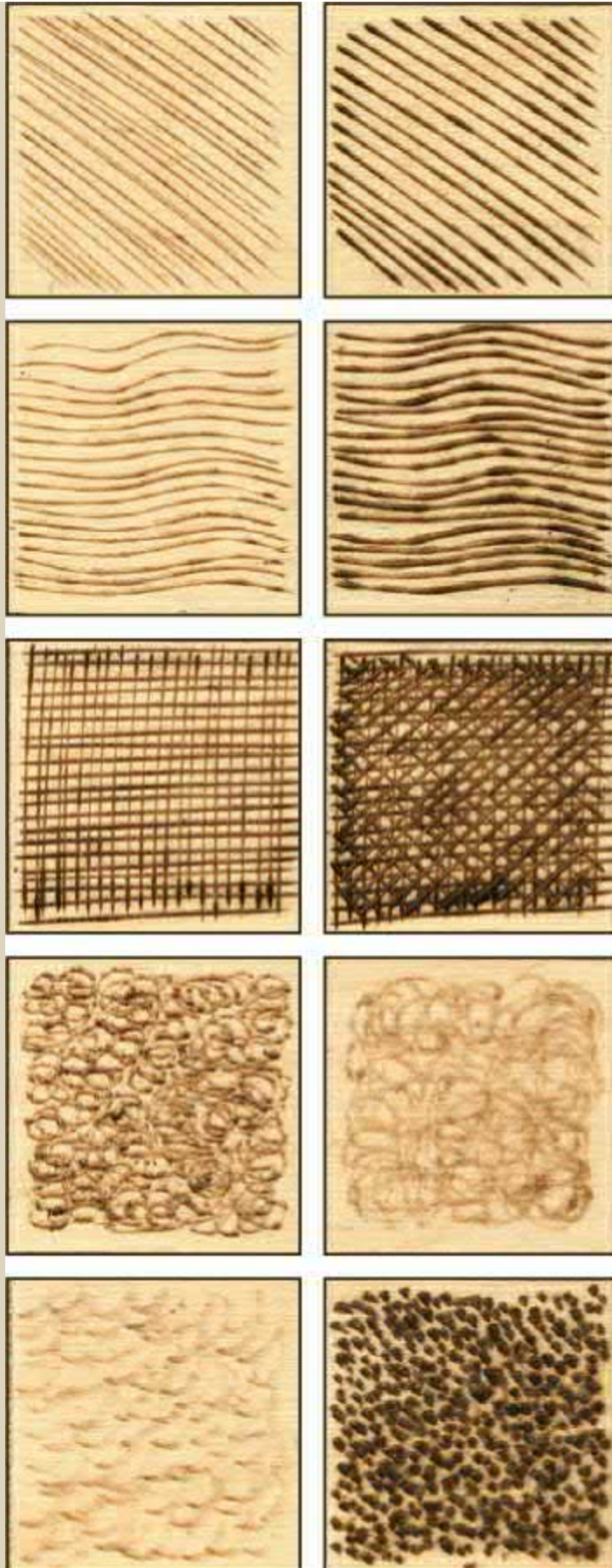
Row 1: Temperature of the Tip. These tonal value changes were created by controlling the temperature of the tool tip.

Row 2: Burning Time. Pale tones can be burned by moving the tool tip quickly across the wood surface. Slow movement darkens the tonal coloring of the burn.

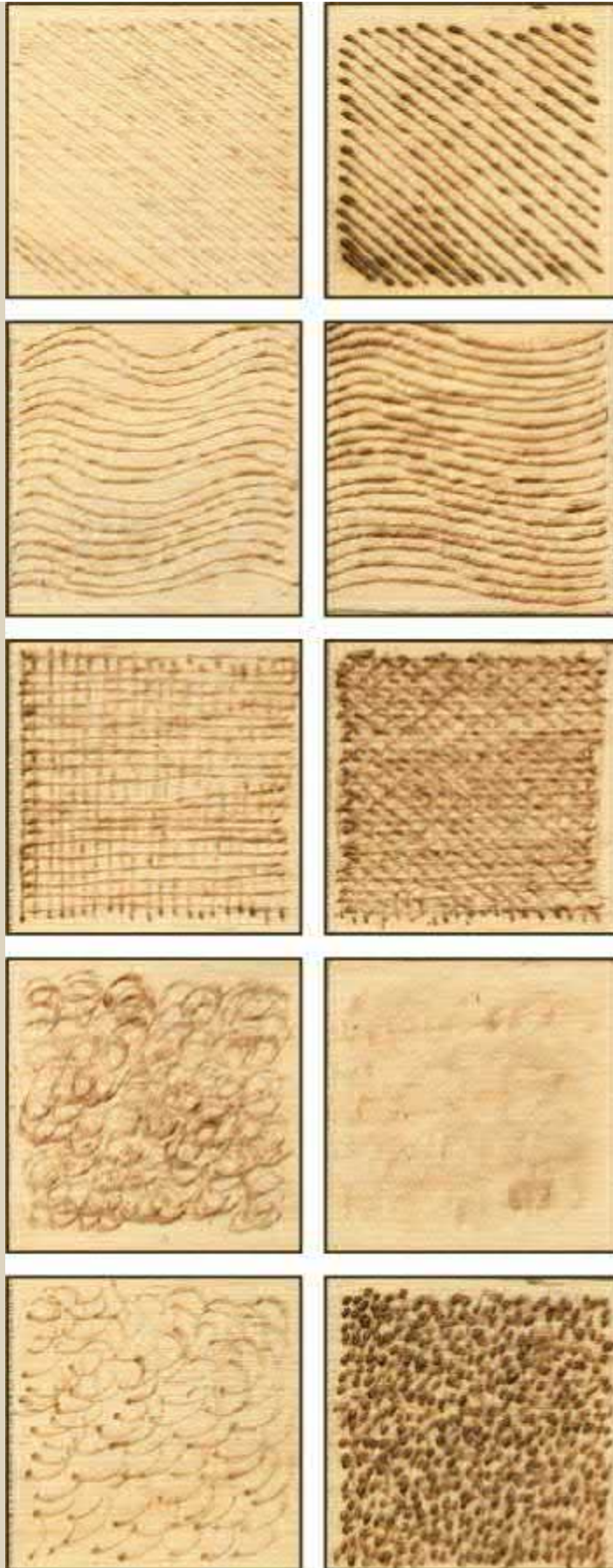
Row 3: Layers of Strokes. The more layers of burned lines or strokes that you apply to an area, the darker in tonal value that area will become.

Row 4: Type of Tip. Fine point tools burn darker lines than wide, flat tool tips. The cone tip (left) and the large ball tip (right) were used for the one-temperature tool side of this chart. The ball tip (left) and the spoon shader tip (right) were used for the variable-temperature tool side.

Row 5: Style of Stroke. The stroke that you choose and the density in which you pack that stroke also can be used to develop tonal values.



One-Temperature Tool



Variable-Temperature Tool



Universal writing tip



Cone tip



Large ball tip



Loop tip



Ball tip



Spoon shaver

Testing pen tips

Before you start on a project, it's important to familiarize yourself with your pen tips. By learning how they burn wood and what patterns can be made, you can better apply those textures to your piece. The best way to test your woodburning tools is by using a practice board (which I will discuss in more detail later in this chapter).

My practice board (see **Figure 2.3**) is worked on 12" × 12" (30.5 × 30.5cm) birch plywood and divided into 1" (2.5cm) squares for each of the burned samples. I can refer to this board at any time during a burning session to determine which tool tip and which burning stroke will work best on my project.

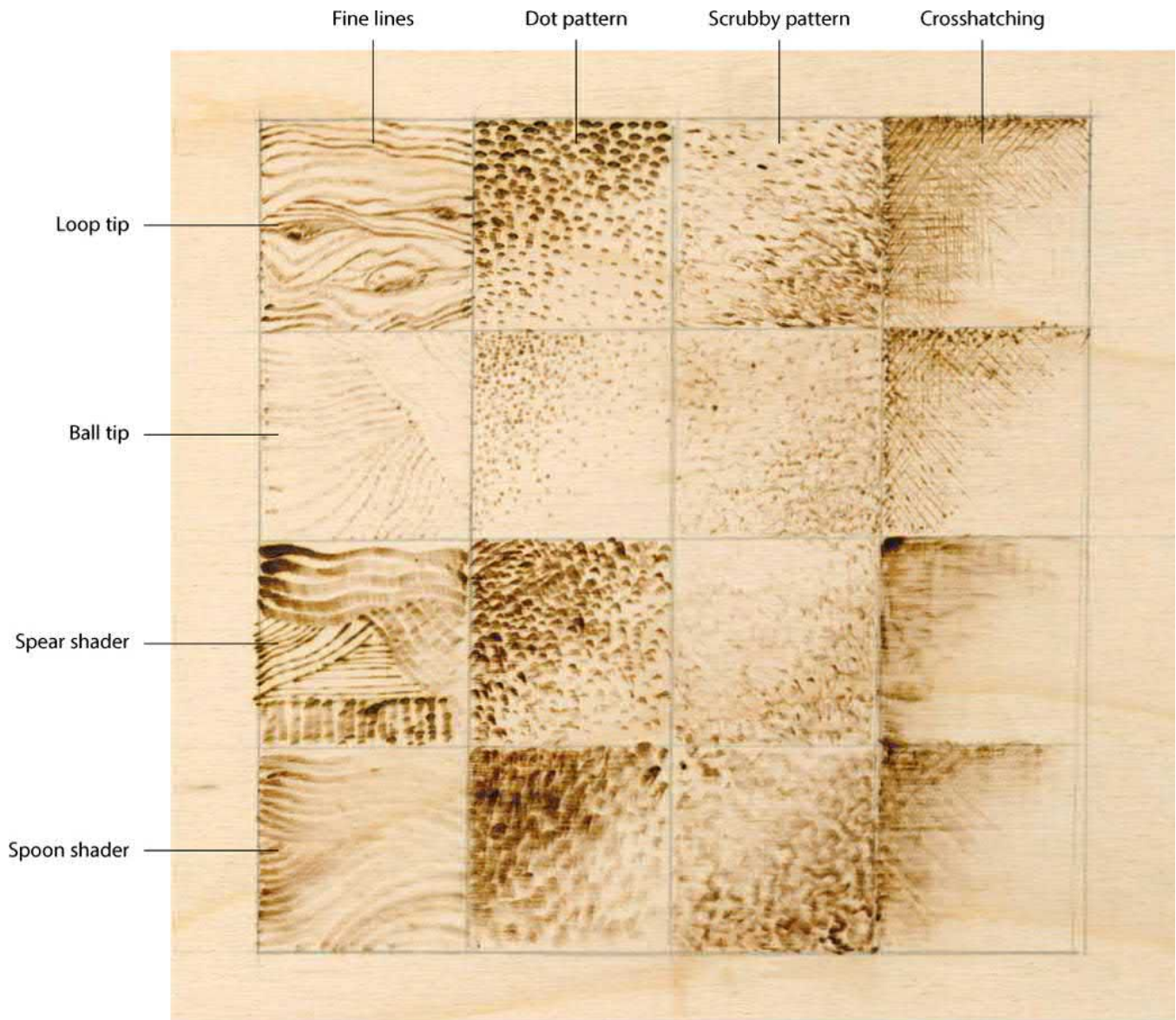


Figure 2.3. This is a practice board using the same burn-stroke patterns worked through each of the pen tips.

The stroke styles are from left to right: fine lines, dot patterns, scrubby patterns, and crosshatching. Dot patterns are also called *pointillism*. This is when the tip of the pen, touched and lifted from the wood, leaves a small circular shape to the burn. Scrubby-line strokes are a continuous curling or meandering line that fills an area with textured shading. Crosshatching is when long, thin lines are drawn, with each layer worked in a new direction. You can build up the burning into ever-deepening tonal values.

Since my practice board is large in physical size, I can experiment and explore new textures, burning strokes, and ways to treat my detailing before I do the work on the main project. I can practice and I can make mistakes as I learn without worry of damaging my primary work.

Loop-tip pen

For outlining, wide line shading, and texture work, I use my loop-tip pen. It is also called a standard writing tip. By holding this pen in an upright position, 90 degrees from the working surface, fine detail lines can be pulled. To create wider lines in your texturing, drop your grip to about 45 degrees from the wood. This lets the side of the wire touch the board, giving you more metal-to-wood contact.

This classic burning pen tip is a mainstay for any pyrography tool kit. The tightly bent loop at the point of the tip creates even, medium-width lines and carries the heat well for your burning unit (see **Figure 2.4**).

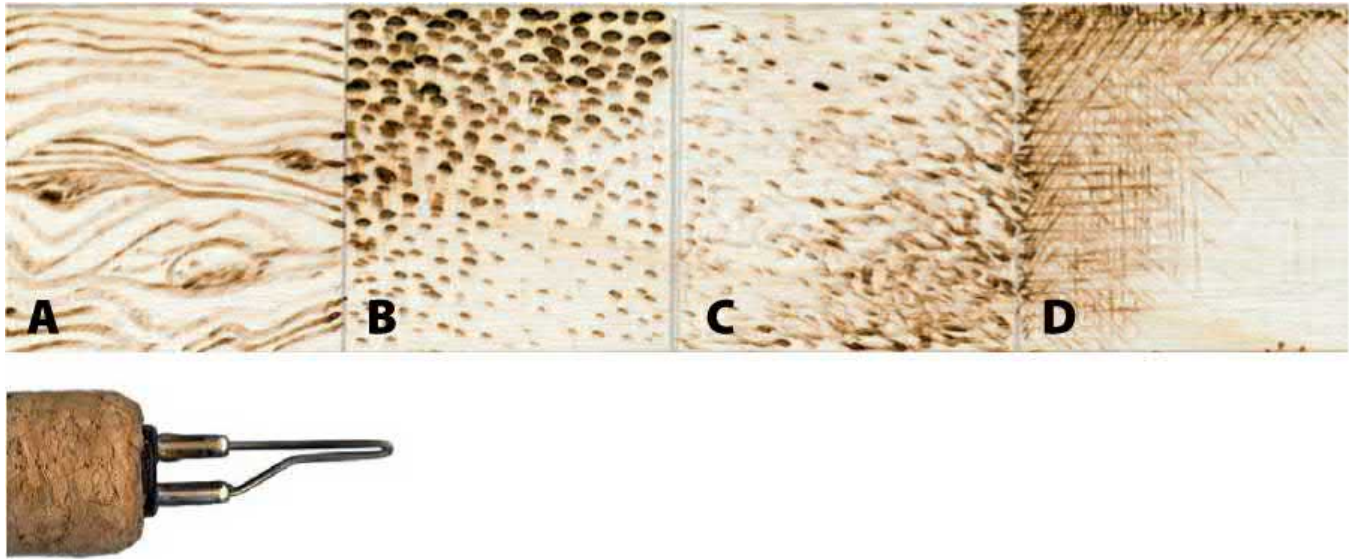


Figure 2.4. Sample square A shows how the loop-tip pen makes a thick to thin line as you move the tip from its center point to the sides of the loop. B shows a dot pattern of small black ovals. The thick and thin effect from this pen tip adds to the texture of the scrubby stroke in C.

Fine Line Work

Using any temperature setting and holding the tip upright to the wood, you can make even lines for both shading, accent, and outline work. The higher you set your temperature, the darker and thicker the lines will burn. By reburning the lines, the tonal value can be darkened.

Texture Patterns

Any texture pattern can be created using a loop writing tip. Simple random curls, tightly packed circles, and even crosshatched patterns are easily made using the fine line made by the loop. The more tightly you pack any texture line, the denser and darker the tonal value of that area.

Solid Fill

At high temperature settings you can use the loop tip to create tightly packed small ovals to bring an area into your darkest tonal value.

Ball-tip pen

This micro writing tool is manufactured using either thinner wire and a tighter bend at the tip or a small ball welded to the tip. This means that little metal comes into direct contact to the working surface, which creates fine detailing lines. Fine, dense textures can be layered using this tool to burn an area into a smooth, even tonal value (see **Figure 2.5**).



Figure 2.5. This small ball-tipped pen makes a consistently even line or dot no matter how you position the angle of the pen to the wood. The thinness of your burned line remains the same throughout the outline strokes, dot patterns, scrubby strokes, or crosshatching work.

Ball-tip pens come in a variety of diameters, with larger diameter tips creating wider lines and smaller diameters making thinner lines. They have three primary purposes: outlining, scrubby shading, and solid-fill work.

Outlining and Writing

You can outline all your pattern lines to give your pyrography a cartoon or coloring book effect. Lightly outline the pattern using a cool temperature setting to set your lines. Next, work each area with your chosen style or texture. When all the shaded texture work is done, rework the outlines at a medium-high to high setting. Vary the width of the lines to give your outline more interest.

Not every project needs to be outlined. If you have worked your project using shaded tonal values, outlines will not be needed to visually separate one area from another. No object in nature comes with outlines; for landscape scenes or animal portraits, use as few accent lines as possible.

Scrubby Shading

Small, short scrubby strokes can be made with a ball-tip pen to create even, graduated shading for your elements. Scrubby textures are made in a slow, even back-and-forth motion or in a tight, random circular movement. Work several layers of scrubby strokes to deepen the tonal value in any area.

Fill Textures

Using a ball-tip pen on medium to medium-high temperature settings and a touch-and-lift stroke will create your solid-fill areas. The tighter you pack the small, dark dots made by this texture, the darker your area will be.

Avoid using a high temperature setting for this type of fill texture. Too hot a setting will cause the dots to bleed or halo into the adjacent areas of the design.

Spear/skew tip pen

The curved-edge spear tip has a thinner metal body than the spoon shader, which allows it to create darker tonal values at a lower temperature setting (see **Figure 2.6**). The curved side lets you pull thin, even lines without a dark starting point spot, as often happens with a ball-tip pen when you work the pen

on its point. The spear tip is used on all its edges, each creating a different thickness or intensity of the stroke. Pull the skew with the point flat to the wood and you get a thick line.



Figure 2.6. The touch-and-lift dot pattern of pointillism with this tip burns small triangles, as seen in square B. For D, the side of the spear shader is pulled so that the wide edge of the shader touches the board, creating a graduated, unlined shading effect.

Long Shading Strokes

Using the wide point in the curve (also known as the belly), you can pull long, wide shading strokes. Long strokes are utilized by a touch-and-slowly-pull movement.

Fine Line Work

To create an extremely fine line, either lift the tip to work just the point or angle the tip to burn along one of its curved edges. On low temperature settings, these lines are barely visible. On hotter settings, the lines are perfect for engraving, crosshatching, and accent work.

Triangles

Because the curved-edge spear carries a large amount of heat, the tip can create small, even triangles in your designs. Set your thermostat on a medium or medium-hot setting and use a touch-and-lift stroke. The lower you hold the tip to the wood, the larger your triangle will be.

Spoon shader pen

Spoon shaders have a flat surface that may be rounded or pointed at the tip. The shaft of the tip is bent so that the bowl of the spoon lies against the wood when holding it like a pencil. This style tends to have a thicker metal tip than curved shader tips, so they may require a slightly higher temperature setting during use.

Spoon shader lines have graduated tonal values to their edges, not crisp finishing lines. The spoon belly of the tip burns the center of the line to a slightly darker tonal value than where it rolls upward

along its side edges, away from the wood (see **Figure 2.7**).

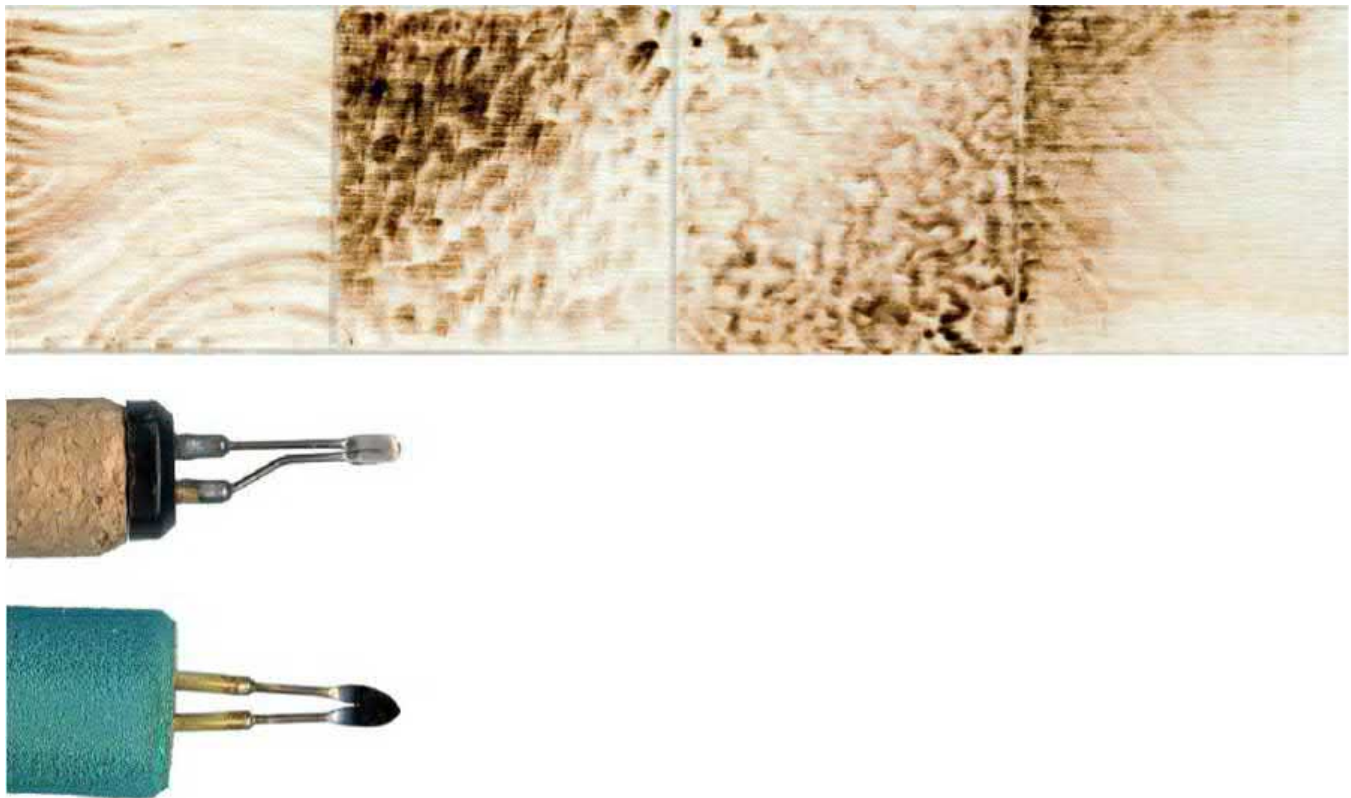


Figure 2.7. When used for pointillism in B, the spoon shaver leaves a small square- or triangle-shaped blur of burning. The scrubby stroke worked with the spoon shaver is undefined, as seen in in C. Pulling your spoon shaver in fine lines, alternating direction, works a soft crosshatch pattern to the wood. Because so little of the spoon area touches the wood, this stroke pattern can accent the grain line of your board, as you can see in D.

Scrubby Shading

This small, curved shaver creates a wide path of smooth tonal values, excellent for general shading within your design. I find that a low-medium temperature and a circular motion quickly bring an area up to its color tone without obvious pen strokes or lines.

By setting the temperature setting to medium or medium-high, you can lay the flat of the shaver against the wood and pull short, small touch strokes to create the scrubby shading effect.

Lifting the shaver slightly to work the tip closer to the point or curved edge allows you to move in a random, circular motion for even shading. Add layers of shading strokes to graduate an area from a pale to dark tonal value. This is a great way to fill in or deepen small areas in your project where you want to even out another burned layer of work.

Leading Edge Lines

The shaver can be first laid flat against the wood and pulled in a long, straight line to give the general shape of the boards. A second stroke can now be laid over the long pull stroke to separate each board with a fine, thin, slightly darker tone by leaning the spoon shaver's side edge into the wood.

Tonal values

Tonal value refers to how much white, gray, or black an area contains. As pyrographers, we work in sepia browns, which ranges from unburned space in an area to a solid fill of black-brown burns.

The color of the unburned working surface is our palest tonal value and the equivalent to white. Use

low temperature settings, thin lines, and lightly packed strokes to create the palest tonal values. As you turn up the heat, thicken the burned lines, or more tightly pack the burn strokes, your tonal value will darken into the mid-range tones. Hot burns and tightly packed strokes take the coloration of the sepia down to its darkest values.

It is through sepia values and tonal values that we create graduated shading in our burns.

Making a sepia tonal value guide

The wood species, tip, texture stroke, density of line work, and the thermostat temperature setting of your burning unit determines your tonal values. Because so many factors come into play, I cannot give you specific temperature setting numbers for your unit or for the wood that you are working.

Establish a reference guide, a 10- or 12-unit sepia scale, using your burning unit and favorite pen tip. Match the number of scale squares to the number of dial settings you have on your burning unit. Include one extra square to become your white, unburned tonal value at the top of the scale. For my sample guide (see **Figure 2.8**), I have 13 squares, one unburned and one for each number on my burning unit dial.

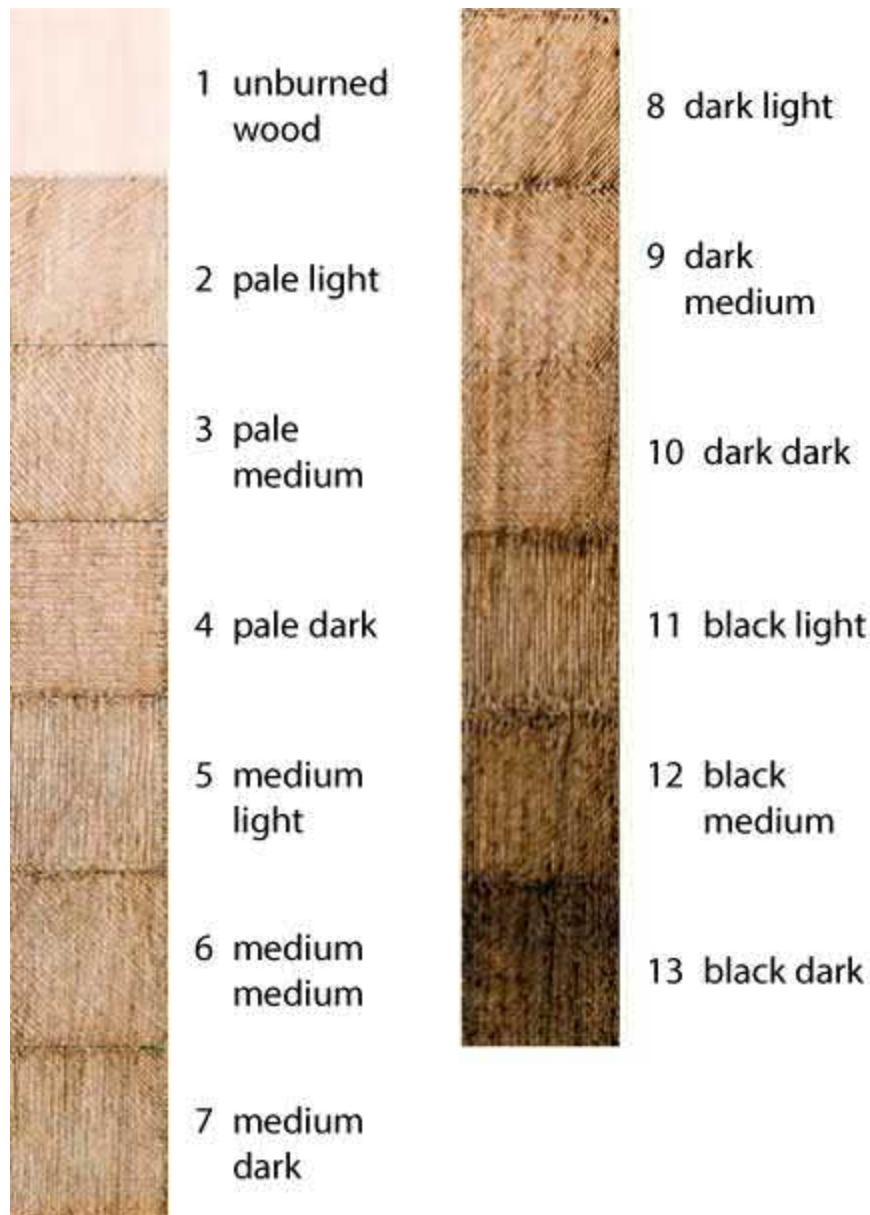


Figure 2.8. A tonal value guide should consist of one blank square and an example of each dial on your woodburning pen, providing a range from lightest to darkest. Write on your practice board what pen and dial number you used.

Use the simple scrubby stroke to fill each unit, slowly developing your range from pale light through black dark. With a pencil, mark your practice board with the temperature setting that your unit used to create each tonal value.

Print a copy of this page on a high-ink setting. As you work through your project, you can refer to your paper chart and your practice board to accurately copy the value work in your project (see **Figure 2.9**).

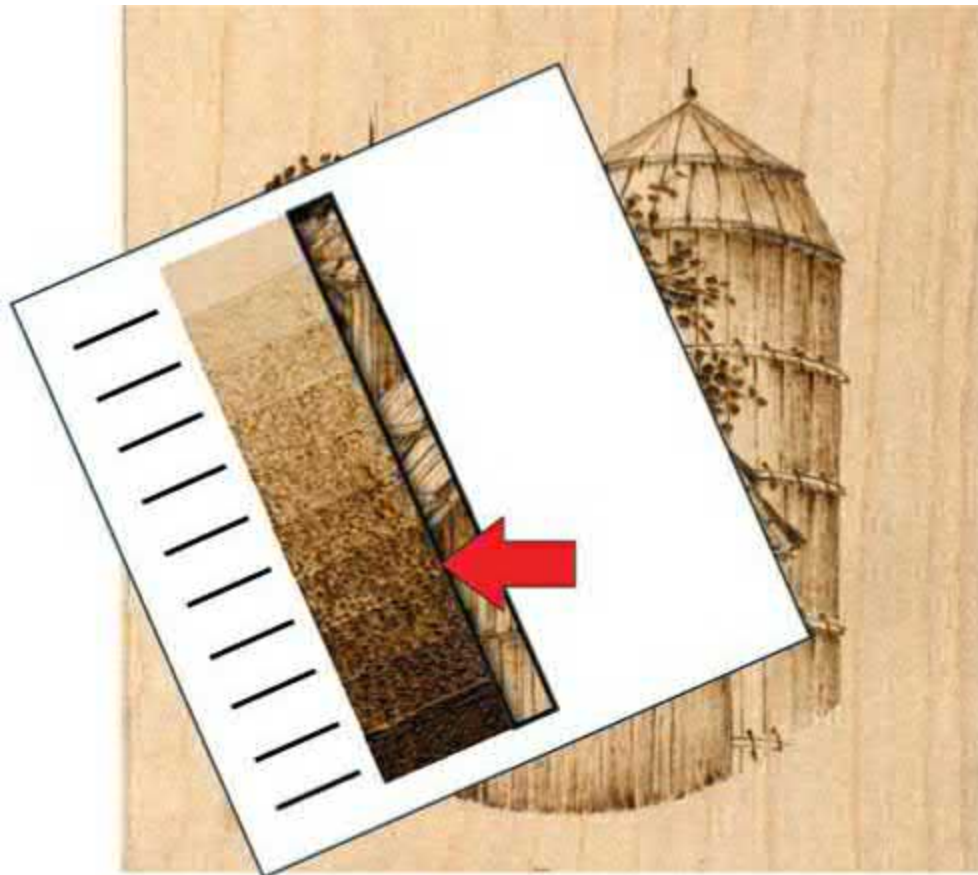


Figure 2.9. By cutting a window in your printed sepia value guide, you can lay the guide directly over a photograph to determine which temperature setting you need to exactly match that area of the photo.

Pen tips and tonal values

As we work through the practice board in the next section, you will see that each pen tip tends to create its own level of tonal value for your dial setting. A ball-tip pen may need much more heat to obtain a medium-dark value than the loop tip or spoon shader tip. You can work a sepia scale for each pen tip you will commonly be using.

Creating a Practice Board

One of the fun ways to learn to control your woodburning strokes is to create a practice board. This gives you a working surface on which to experiment with the wide variety of strokes that you will use. It can also be used to record any new strokes and layering techniques that you discover as you grow in this craft. Plus, because this board is only used as practice, it's a great place to work until you learn to control your strokes. Once you have control over the stroke, you can move to your working project with confidence.

I also use my practice board to work out textures and specific elements of a pattern. Small pattern samples not only let me create the textures that I want to use but also help me establish the lights and darks in a pattern before I start on my actual project.

My practice board is a 12" × 20" (30.5 × 50.8cm) piece of birch plywood since this is the wood species that I use the most (see **Figure 2.10**). You may wish to make your practice board on your favorite wood surface so that your practice work will show you the same burns as those on your finished projects.

Begin by creating a pencil-line grid on the wood. I used a soft #2 pencil and the T-square to section my board into 1" (2.5cm) squares with ¼" (6.4mm) spacing between each square. As you begin each new project or approach a texture that you have not done before, try it out first on your practice board. Number each square with a pencil so that you may keep a corresponding card file for each square that notes the particular tool tip you used, the temperature settings for the burner, and on which project you used that texture.

Keep your practice board close to your work area. This makes it quick and easy to add new textures, and it will be handy for choosing previously tested textures for a new project.

Quick Reference Texture Chart

Square #	Texture Name	Tonal Value
Squares 1–5	Dash Stroke	pale to dark tones
Squares 6–14	Linear Circles	pale value to dark tones
Squares 15–23	Wide-Spaced Crosshatch	medium to black tones
Squares 24–32	Tight-Spaced Crosshatch	medium to black tones
Squares 33–37	Random Curls	pale to dark tones
Square 38	Check Marks	medium to dark tone
Square 39	Wide-Spaced Zigzag	medium tone
Square 40	Random Zigzag	medium tone
Square 41	Sun Rays or Grass Strokes	medium tone
Square 42	Wavy Lines	medium to dark tone
Square 43	Seashell Circles	dark tones
Square 44	Tightly Packed Zigzag	medium tone
Square 45	Tight Circles	medium to dark tone

Square 46	ABC	dark tone
Square 47	568	dark tone
Sqaure 48	Scales	dark tone
Square 49	SUE	medium to dark tone
Square 50	Mountain Peaks	dark tone
Square 51	Quilting	medium tone
Square 52	Overlapping Hearts	medium tone
Square 53	Herringbone	medium to dark tone
Square 54	Diagonal Ripples	medium to dark tone
Square 55	Water Ripples	medium to dark tone
Square 56	Tightly Packed Spots	dark to black tone
Square 57	Long Scales	dark to black tone
Square 58	Close-up Branches and Leaves	medium to black tones
Square 59	Wood Grain	pale to dark tones
Square 60	Tall Grass Clumps	medium to dark tones
Squares 61–64	Scrubby Lines	pale to dark tones
Square 65	Small Crosshatched Elements	pale to dark tones
Squares 66–68	Straight Lines	pale to dark tones
Square 69	Long Curved Line	pale to dark tones
Square 70	Short Curved Line	pale to dark tones
Square 71	Veining Curved Line	pale to dark tones
Square 72	Background Trees	medium to dark tones
Square 73	Tall Grass	pale to dark tones
Square 74	Stone Walkway	medium tones
Square 75	Evergreens	pale to dark tones
Square 76	Deciduous Trees	pale to dark tones
Square 77	Pines and Deciduous Shrubs	pale to dark tones
Square 78	Roof and Shadows	pale to dark tones
Square 79	Barn Boards	pale to dark tones
Square 80	Bricks	pale to dark tones
Square 81	Small Pine and Shrub	pale to dark tones

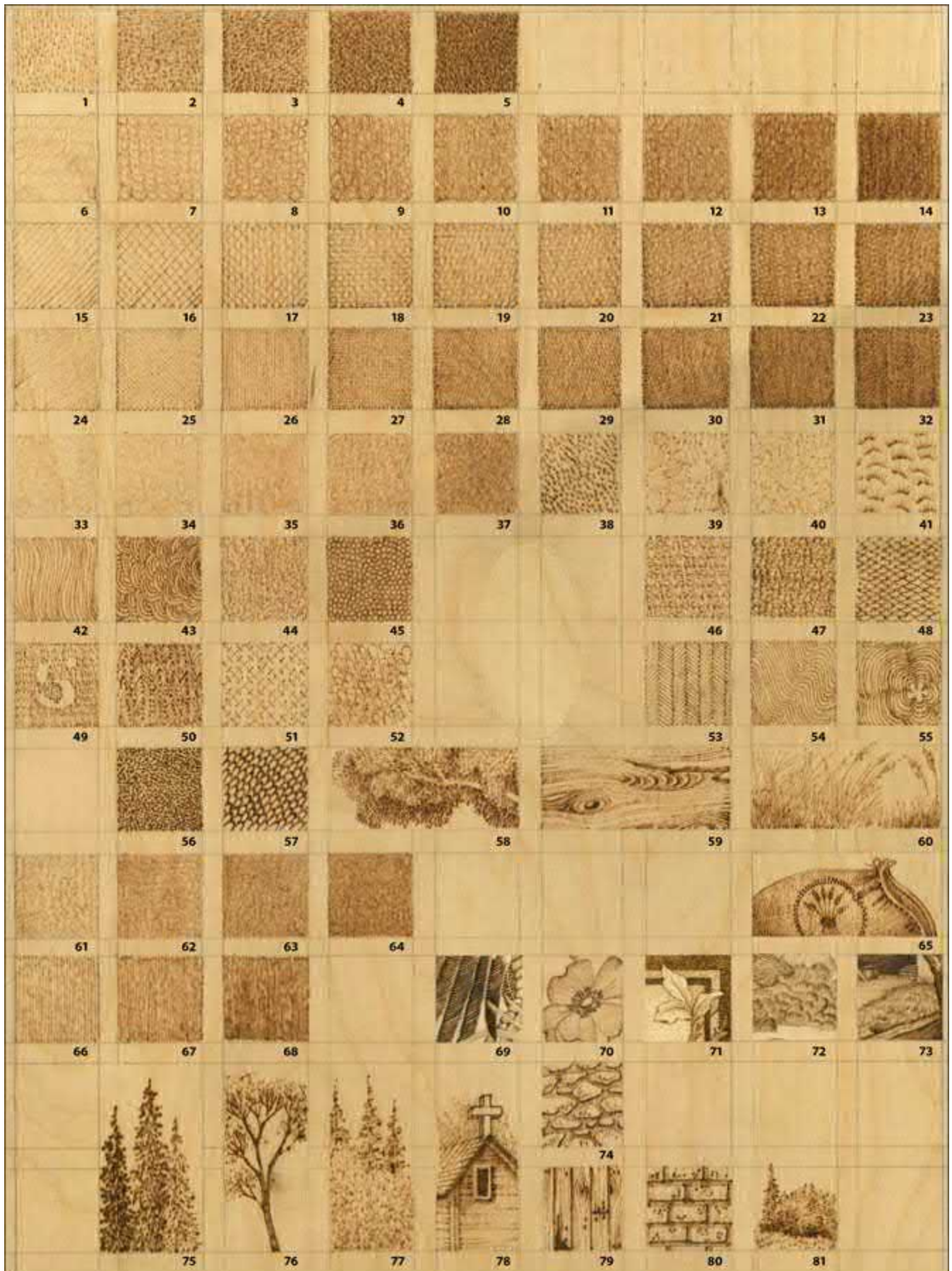


Figure 2.10. By creating a practice board that you keep close to your work area, you can test new textures, tonal values, and even small pieces of a design before you begin work on your project surface.

Tonal value, or sepia scale value, textures

There are a variety of textures that lend themselves extremely well to realistic shading in a woodburning. This series of textures can be developed into darker tones by repeating the texture in layers. With each new layer, change the direction in which the texture is burned. Notice the top four rows of work on the practice board (**Squares 1–32**): They slowly move through gradient tones of chocolate. Each of these rows has been created using a different texturing stroke. That particular stroke was then repeated through each square of the row, adding more tonal depth to each subsequent block (see **Figure 2.11**). A low-medium temperature was used to create these samples; the temperature was not changed during the work.



Square 6



Square 7



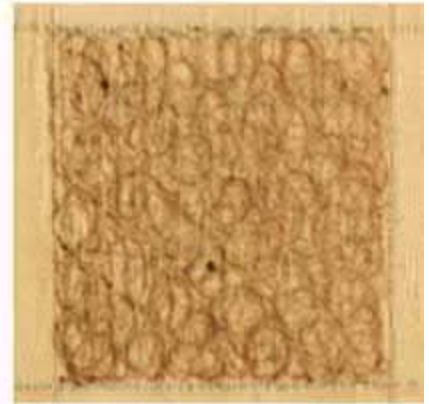
Square 8



Square 9



Square 10



Square 11



Square 12



Square 13



Square 14

Figure 2.11. In this section, we will examine the practice of layering textures. By adding light layers of texture, you can slowly build up the tonal values of your design. By rotating the texture on each application, the area will become gradually darker. Squares 6 to 14 show just one example of this technique.

Dash Stroke

This sample was created using a short dash-like stroke and the small round tip (see **Figure 2.12**). The first square (**Square 1**) shows the texturing running in a vertical pattern. The second square (**Square 2**) was first worked vertically, and then another layer of burning was added running horizontally. A third layer of burning appears in the last square (**Square 3**); this one runs diagonally across the first two layers. The early stages of this texture have a light dappling of darker spots, but, as you add more layers,

this will disappear. This is an excellent pattern for small areas that need to be a dark tonal value.

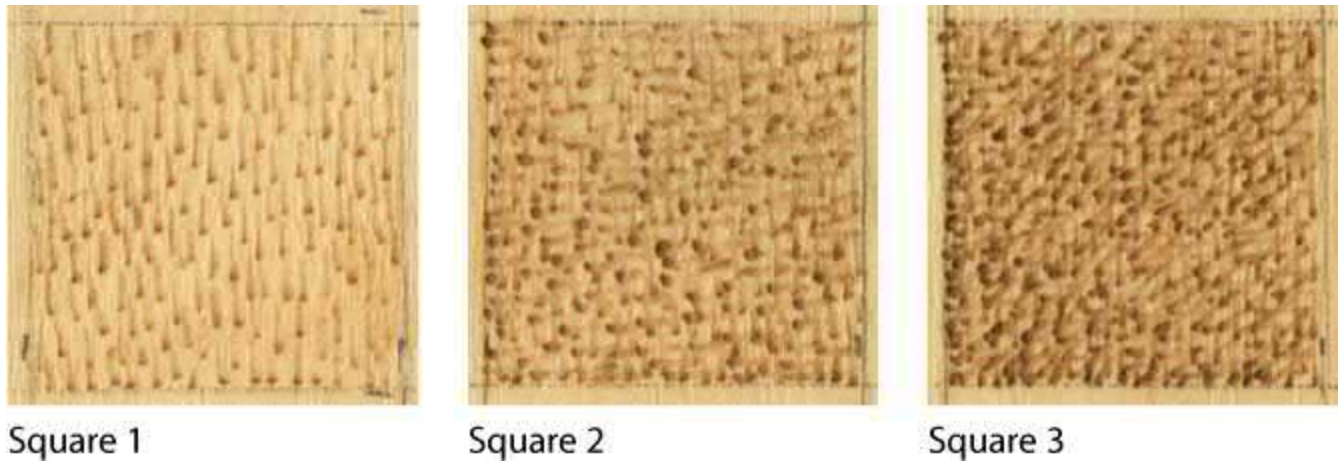


Figure 2.12. Dash stroke.

Linear Circles

Very small circles make up this texturing (see **Figure 2.13**). Begin at the top of the square to make your first circle. Allow the tool tip to flow into the next circle, then the next. You are burning a row of connected circles that run from left to right across the square (**Square 6**). A second layer of connected circles running from top to bottom is added to the second square (**Square 7**). In the third square (**Square 8**), use a diagonal direction for the third layer. This pattern is great to use to fill in an area that has already been detailed with a high-temperature outlining.



Figure 2.13. Linear circles.

Wide-Spaced Crosshatch

Created with widely spaced straight lines, crosshatching is a classic texture used in pen and ink studies (see **Figure 2.14**). The first two layers (**Squares 15 and 16**) are worked on the diagonal, the third (**Square 17**) on the vertical, and the fourth (**Square 18**) runs horizontal to the design. Because of the wide spacing, the burn lines of each layer can be seen once the tonal value has been developed. This adds interest to the shaded areas because of the visual tension caused by the changing line directions.



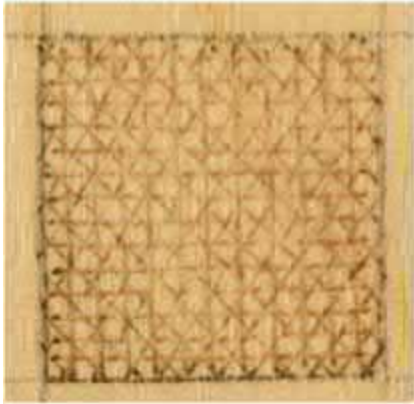
Square 15



Square 16



Square 17



Square 18

Figure 2.14. Wide-spaced crosshatch.

Tight-Spaced Crosshatch

By packing the straight lines tightly during each layer of work, this version of crosshatching is excellent for very realistic designs (see **Figure 2.15**). Unlike wide-spaced work, this texture quickly loses the linear effect as the diagonal, vertical, and horizontal lines are added (**Squares 24–27**). Tight-spaced crosshatching is an excellent choice when you need perfect control in the work. Hold the pen at 90 degrees to the wood to burn the thinnest fine lines as possible.



Square 24



Square 25



Square 26



Square 27

Figure 2.15. Tight-spaced crosshatch.

Random Curls

Creating random curls is really nothing more than doodling loops with the tool tip (see **Figure 2.16**). Place the tip of the tool onto the wood and start creating very small, tightly packed circular shapes (**Square 33**). Do not lift your tip as you work; instead, flow right into the next curl. Because the tool tip remains in contact with the wood throughout the burning of that layer, there are no dark spots created as happens with a start-and-stop stroke. Random curls texturing creates a very soft texture when used in light layers (**Squares 34–35**) and is perfect for working over high-temperature outlines and details.



Square 33



Square 34



Square 35

Figure 2.16. Random curls.

Scrubby Lines

This style of texturing is also random and chaotic and worked as if you were scrubbing the woodburned color onto the wood, moving in whatever direction is necessary to completely fill an area (see **Figure 2.17**). Place the tool tip onto the board, and do not lift the tip as you work to create tightly packed, zigzag-type lines (**Square 61**). The zigzags are very short, not much more than 1/8" (3.2mm) long. You can see in the sample that they are laid down in a random pattern; no attempt is made to keep each zigzag the exact same length. The early stages of this texture will have that dark spot, dappled effect. However, thicker layering will create very dark chocolate values (**Squares 62 and 63**). This is an excellent texture to use when you need black tones in your work.



Square 61



Square 62



Square 63

Figure 2.17. Scrubby lines.

Repeating pattern textures

Not every woodburning needs careful, controlled shading to create realistic images. Many designs can be approached using fun little patterns within the design as the shading work. Anything that you can conceive can work as a texturing pattern. Take a look at the following examples.

Check Marks and Zigzags

Check marks in a random order are wonderful marks to create texture (see **Figure 2.18**). **Square 38** is created using little check marks. Because the texture is very small, even at a low temperature this check mark will take on a medium to dark tone. A nice contrast is created because of this dark tone against the pale color of the wood.



Square 38



Square 39



Square 40



Square 44

Figure 2.18. Check marks and zigzags.

Quick back-and-forth strokes create a zigzag pattern, or texture, to the burned area. The texture in **Square 39** is a wide-spaced, chaotic zigzag pattern. This is a great pattern for working large areas of tree leaves.

Square 40 has a random-moving zigzag texture. Place your tool tip onto the board and do not lift it.

As you work the texture, just keep changing directions. This will fill your working area with a dark to light variegated line.

By tightly packing a random zigzag stroke (**Square 44**), you can create wonderful mid-tone colors. As you work to constantly change the direction of the zigzag, let one part of the line touch or cross over another.

Wavy Lines and Sea Shell Circles

Try wavy lines as another way to texture your work (see **Figure 2.19**). The first square to the left (**Square 42**) is made up of wavy lines. Begin by pulling one line into the work area. Let that line move gracefully back and forth through the space. Lay a second line next to the first, following the path the first line created. Continue until your area is completely filled. As you work, do not try to be exact with each line; let the overall texture change to create new movement.



Square 42



Square 43

Figure 2.19. Wavy lines.

In the middle (**Square 43**) is a classic oriental-styled pattern of seashell circles. On one edge of your area, create a very small half circle. Another half circle, just a littler larger, is made, surrounding this first one. About four to five half circles create one seashell. The next seashell is worked against the outermost half circle of the first.

Letters and Numbers

Numbers, letters, and even well-recognized symbols can be used to create a texture pattern (see **Figure 2.20**). In this left square (**Square 49**), three letters—*S*, *U*, and *E*—have been used, creating the name *SUE* as background texture.



Square 49

Figure 2.20. Names.

In **Figure 2.21**, the left and middle squares (**Squares 46** and **47**) were test samples for the *My Room Gingerbread Man*, pattern here. The first square (Square 46) is made up of the ABCs, and the second (Square 47) with 5, 6, and 8. Notice that I left out the number 7. That is because 5, 6, and 8 all have a circular pattern, whereas 7 is a linear design. Not only letters, but also entire writings or quotes can create fantastic background textures. In the *American Eagle* pattern, see here, a letter from a Civil War general could be used to fill in the background space. The writing, therefore, makes the background as important as the foreground image of the eagle.



Square 46



Square 47

Figure 2.21. Letters and numbers.

Mountain Peaks

Small, interconnected mountain peaks are worked in **Figure 2.22 (Square 50)**. The sides of each peak are slightly curved because this keeps the texture from becoming too rigid. First, one row of peaks was created. The next row was then laid under the first, with the second-row peaks being tucked into the first.



Square 50

Figure 2.22. Mountain peaks.

Quilting

Figure 2.23 (Square 51) is a broken crosshatch pattern that gives the impression of quilting stitches. A very widely spaced crosshatch is first applied on the diagonal. The second layer of crosshatch is made up of dashed lines, which creates the small crosses in the previous layer and allows a small area of original wood to show.

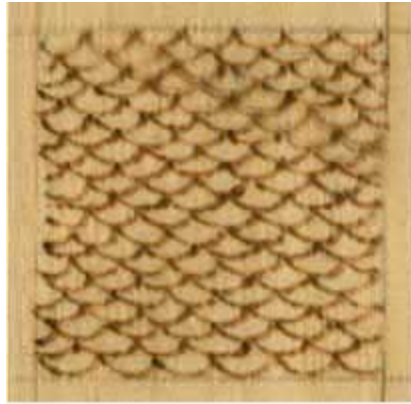


Square 51

Figure 2.23. Quilting.

Scales

Fish scales, or dragon scales, were created for Figure 2.24. This is a design made up of small semi-circle rows (Square 48). Notice that any individual curve is not a full half circle but instead a small arch. The next row is applied starting the semi-circles in the middle, or at the high point, of the semi-circles in the first row.



Square 48

Figure 2.24. Scales.

Herringbones

A herringbone pattern is wonderful for fun woodburning (see **Figure 2.25**). This pattern is burned in rows of short diagonal strips (**Square 53**). The next row changes the direction of the diagonal. When the area is completely burned, you have rows or stripes, and you also have a zigzag effect to the finished work.



Square 53

Figure 2.25. Herringbones.

Ripples

Ripples do not have to run in the direction of the element or area that is being worked (see **Figure 2.26**). The left square (**Square 54**) obviously has both vertical and horizontal sides, but the ripple pattern was laid down on the diagonal.



Square 54



Square 55

Figure 2.26. Ripples.

A different ripple effect is shown in the right square (**Square 55**). For this sample, a simple shape was first burned. Then, expanding lines of the same pattern were worked out from the first. If, for example, you had a cluster of leaves that had been outlined, you could burn water ripples around that cluster to fill in the surrounding background space.

Straight-Line Variations

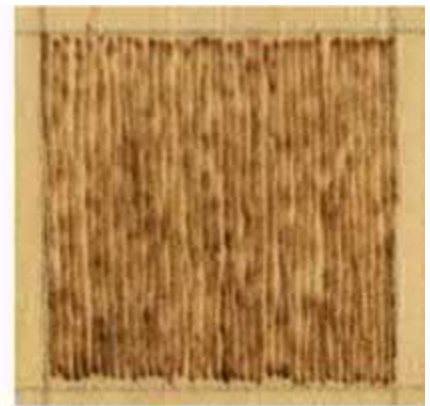
All three of these squares were created using a straight-line burn (see **Figure 2.27**). The first square (**Square 66**) has one layer of straight lines, the middle square (**Square 67**) has two layers, and the right square (**Square 68**) has three layers. Straight-line fill is great for filling in either small or large areas where you need a dark tone. However, this pattern does not burn evenly. Notice in the third square (Square 68) that the bottom section of the square is darker than the top. The variations in tonal value created by this texture are perfect for the wood bark of a large tree and for ground shadows.



Square 66



Square 67



Square 68

Figure 2.27. Straight lines.

Hearts and Circles

Overlapping or closely spaced hearts and circles also make excellent background fill (see **Figure 2.28**). Small overlapping hearts fill in the space of the top square (**Square 52**). All of the hearts have been laid down in one diagonal direction so that the double loops are to the upper left and the points of the hearts are oriented toward the bottom right. This pattern works very well for fun feathers.



Square 52



Square 45

Figure 2.28. Hearts and circles.

The bottom square (**Square 45**) is filled with tightly packed, tiny circles. Each small circle is touched by the surrounding circles. An area that uses this texture will retain the circular effect, which burns to a medium-dark tone, but it also will leave some of the original wood showing.

Tightly Packed Spots and Long Scale Strokes

Some textures create very black areas in woodburning (see **Figure 2.29**). The top square (**Square 56**) is one of these textures. This sample was done by simply touching the tool tip to the wood and then lifting the tip. Each touch burns a very dark spot into the design. Here the spots were worked loosely packed, but had they been allowed to touch, totally filling the square, this burning would appear black-chocolate when completed. This is a fast and easy way to render the dark tones in your work.



Square 56



Square 57

Figure 2.29. Dark strokes.

Elongated fish scales have been burned in diagonal rows for the bottom square (**Square 57**). Notice how much darker in tonal value this burning is than the previous sample of scales (see Square 48, Figure 2.26). Because the elongated stroke is not as easy flowing as the semi-circle, more time is required to create the elongation. When any textured burning is done in a slow motion, the burning becomes deeper in tonal value.

Patterns for Practice

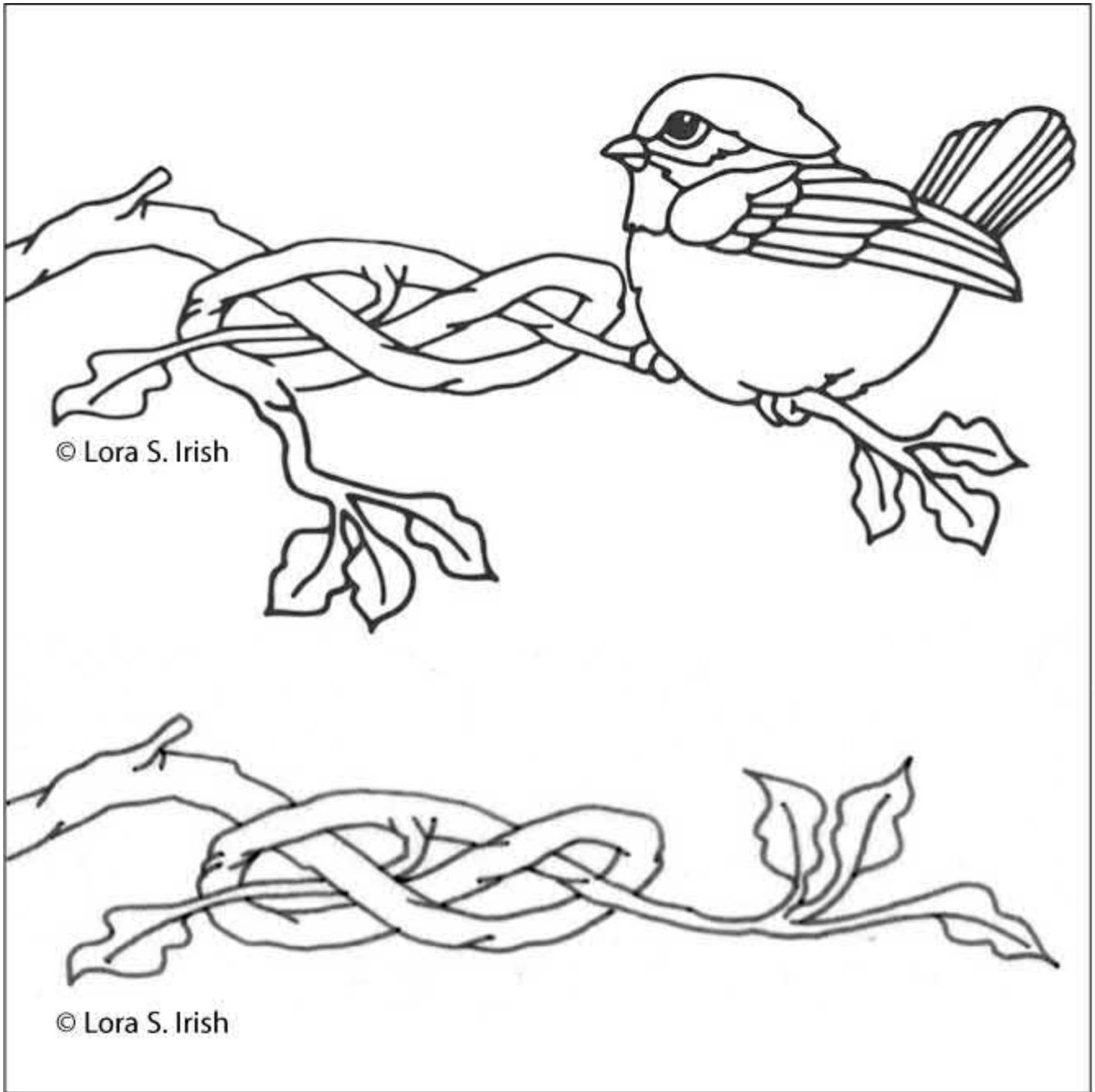
Now that you've worked on creating light and dark areas, creating textures, and practice boards, I want to give you some patterns for trying some of the different techniques. Go ahead and try the whole pattern if you want, or you can just try parts of the pattern to further explore its listed skill. Unless otherwise stated, the practice projects in this chapter were worked using the variable-temperature tool with the writing tip on birch plywood. If you are working with the one-temperature tool or rheostat tool, please use the universal tip.

Practice Board Exercise One: Tonal Values

A good way to test what you have learned about pen tips and values is through a low-pressure project on your practice board. Refer to your tool tip practice board from [here](#) and sepia tonal guide [here](#). This project will take you through all the general steps to any woodburning design and get you familiar with the how-to process on your main woodburning projects. This example is using *Celtic Knot Chickadee*, where we can look at each step in-depth.

Preparation

Begin this project by lightly sanding the board surface with 220- or 320-grit sandpaper to remove any wood fibers or ridge lines left from the manufacturing process. Work the sandpaper with the wood grain to avoid adding fine scratches that may show in your burning later. Remove the dust with a slightly damp cloth. For this project, use brown kraft paper or a brown bag paper as your final sanding media.



- 1 Here are patterns to transfer onto your practice board. I used to top pattern, but you might want to start simply with just the branch.



- 2 On a low temperature setting with a loop-tip or ball-tip pen, lightly outline the pattern lines. This is just to set the pattern lines so that you do not accidentally erase them as your hand moves across the board.



3 Working at a low temperature to create pale tonal values, begin mapping where you want your shadows and shading to fall. In general, an object that lies behind or underneath another object will carry a shadow cast from the top object.

4 Decide about your background. Will your background be left unburned in the palest tonal value? Will you burn all the surrounding area to your darkest black tone? Or will your background hold more design, such as the distant mountains to a barn scene?

Your background choice helps determine how dark you want your shading tones to be. Unburned backgrounds, as shown in this project, allow for very dark shading to be used directly in the design. The blackest tones are part of the burned pattern.

With black backgrounds, that background holds your darkest tonal value; all design work must be done in a lighter value. Referring to your 1-to-10 sepia scale, if your background is worked as a 10, then your pattern burning must be worked in a 9 or lower setting to be separate from that background.



- 5 Graduate the shading in pale tones, medium tones, and some in the dark tonal value range. This is where you begin to develop the three-dimensional look of your design using the different pen tips and pen strokes. Apply dot-pattern burns on the branches using the ball-tip pen. The belly area of the bird is worked in a pull stroke using the spoon shader. The leaves have a soft, scrubby stroke on a low temperature setting using the loop tip.



- 6 As your design develops, you will need to establish both extremely pale areas inside of the burning as well as the darkest tonal values. You only need a few spots of each white and black value to create a strong contrast. For our bird, the white highlights are under the eye, the center tail feather, and the top curves of wood in the knotted branch pattern. Our black tones are the eye, the cap, and the deep curves underneath the wood knot.



- 7 Add your details. Details are not outlines. They are small sections of an area that are reinforced with a thin, fine line. Some areas of your burn may need no detailing, such as the tips of the tail feather. In other areas, use a changing thick-to-thin line, such as around the edges of the leaves. Allow a few areas of your design to have neither an outline nor detail; instead, let the value work stand on its own.



- 8 Erase any tracing lines or hand dirt with an artist's eraser, gum eraser, or architect's pad. You can add coloring using oil paints, water-thinned acrylic paints, or colored pencils to the work. Finish with either an oil finish or spray sealer finish, following the directions on the can.

Light and Dark Exercise One: Temperature of the Tip

The wheat design used in *Our Daily Bread*, pattern here, is created with a simple straight-line fill texture (see **Figure 2.30** and Squares 66–68 here). The coloring of each line in the wheat—whether it is light, medium, or dark—is controlled by the temperature of the tool. Notice in this finished sample that all of the woodburned lines run vertically within the design and that no element of the pattern has been outlined.

Tips for completing the entire pattern:

- Use a medium-high or high setting to burn the sections that are turned back on the bottom cross leaves and the tall pale leaves.
- The lettering is done in very close, tightly packed, short lines to create the darkest burning on the board.



Figure 2.30. *Our Daily Bread*. Even though this burning uses only one texture, the straight line, it has three distinct tonal values: dark, medium, and light. How cool or hot you set your variable-temperature tool determines the tonal value of the burned stroke.

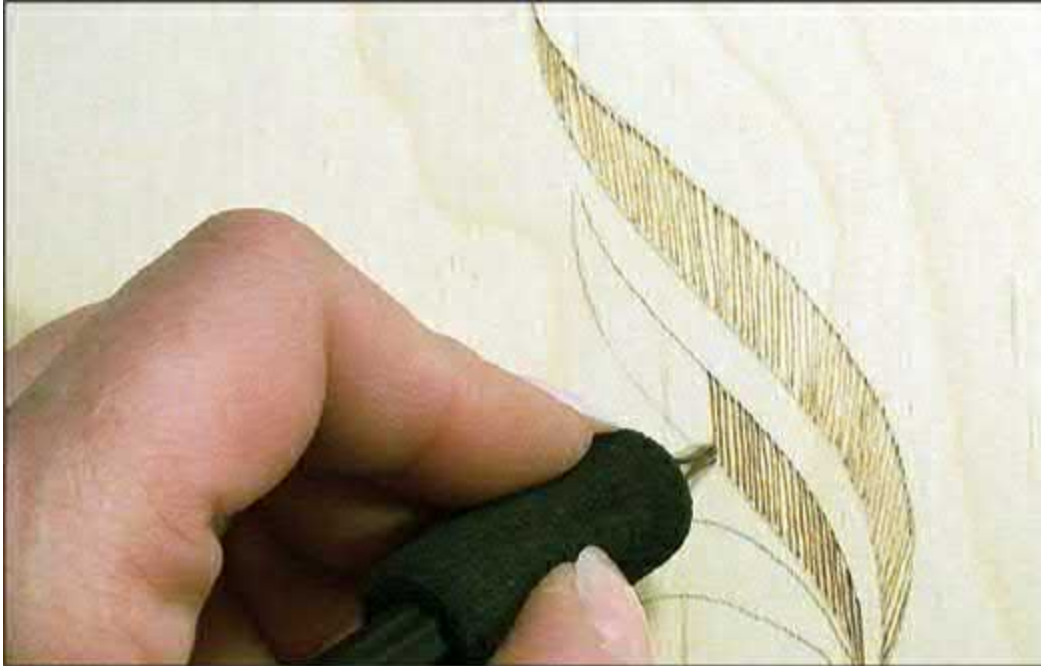


- 1 Here is a small wheat pattern that you can use on your practice board to learn to control the tonal values through your temperature settings on your variable-temperature tool.



- 2 Once the sample pattern has been traced (see here for transferring techniques), set your thermostat to a very low setting. Start your project with the tallest pale leaf. Pull long, light-colored lines from

the top of the leaf to the bottom section, touching the traced line at both points. Fill that leaf with closely packed parallel lines using your writing tip.



- 3** Turn your thermostat up to a medium temperature setting. Fill the second wheat leaf with parallel lines using the writing tip. Notice that these lines burn slightly darker than the lines in the first leaf.



- 4** By turning up your thermostat one more time to a medium-high or high setting, you can now fill the last, third leaf with dark-toned lines.



- 5 The wheat head has three rows of seeds. The center row is burned using a low setting; the right side row uses a medium setting; and the left side row, the stem, and the wheat whiskers are burned at a medium-high or high setting.



- 6 Once all of the burning is done, use a white artist's eraser to remove any remaining pencil graphite from the tracing and very lightly sand the surface with an emery board. Because each area was

created using the same texture—the straight-line fill—the pattern’s depth of color was established solely through the temperature settings of the tool.

Light and Dark Exercise Two: Burning Time

For the pattern *Wild Rose Corner*, here, the thermostat for the woodburning tool was set at a medium range throughout the work (see **Figure 2.31**). The changes in the coloring—the darkness of the wide borderline to the lightness of the leaves—were determined by how long the tool remained on the wood during the burning. Slow strokes create the dark areas; faster strokes make light lines.

Tips for completing the entire pattern:

- Begin by working the texture pattern that lies behind the borderlines and flower design. This texture is a simple swirl design, created by moving your tool in very small, random curls (see Squares 33–37 here) across the wood. Start this curl pattern at the inner corner of the wide borderline; this is your darkest area for the background work. Move the tool slowly throughout this area to burn a medium-toned coloring. As you work away from the corner toward the outside of the pattern area, increase the speed with which you move your tool. Slightly faster burning will create paler curled lines. Continue filling in the background, gradually increasing the speed of your stroke until you can barely see the burn lines along the farthest edges of the work.
- The stems on the rose are done with short straight-line fill strokes (see Squares 66–68 here), allowing the tool to touch the wood long enough to create a medium-dark tone. The dark shading in the rose stems is done by repeating the burning over these areas. This gives two layers to the shaded side of the stem.
- The outline on the flower petals is darker at the base of the flower and becomes pale toward the outer edge.
- The veins in the flower petals, rosebud, flower center, and leaves are done in gently curved lines (see Squares 69–70 here) at a medium stroke speed.
- Work the petal lines from both the outer edge of the petal toward the center and then from the center of the flower toward the center creating two sets of lines within each petal.
- Work the flower center from the central circle.
- Use tightly packed spots (see Square 56 here) to create small dots on the center lines of the rose and in the deep areas of the rosebud.



Figure 2.31. *Wild Rose Corner.* A wide range of values can be created just by learning to control how much time you use to make an individual burned stroke.



- 1 This three rose leaf pattern will let you learn how the speed of the tool affects the tonal value of the burned line or area. As with the exercise for *Our Daily Bread*, this small design can be worked on your practice board.



- 2 Trace the design to your practice board. Set the temperature of your variable-temperature tool to a medium heat. Start by outlining the leaves. Move the tool slowly so that the tool tip can burn a dark line along the edge of each leaf. Increase your speed as you approach a stop area. Notice where the leaf notches touch. The line closest to that joint is darker than the line at the tip of the leaf.



- 3 Begin the stroke at the center vein and pull your tool toward the outer edge of the leaf. The veins are done in gently curved lines (see Squares 69–70 here) at a medium stroke speed. Notice how the line is darkest where it touches the center vein and then pales as you pull the tool away from that vein. This happens because your tool tip is hottest when it first touches the wood. As the tip is pulled through a stroke it begins to cool slightly, therefore lightening the end of the burned line. You can use this to your advantage in a design. Starting the stroke, its darkest point, at the center vein area of a leaf, for example, gives emphasis to the center vein.



- 4 The large wide line behind the leaves is worked with a scrubby line texture and even, smooth movement.



- 5 Watch the color of the burning as you begin working this area. If the color seems pale, slow the tip movement to allow more burning time with each stroke. An early dark tone may mean that you need to move the tool more quickly to achieve a medium tonal value.



- 6 The thin background line is filled with a tightly packed spot that is created by touching the tool tip to the board then lifting. This touch-and-lift action creates small dark dots on your board (see Square 56 here).



- 7 To develop a small amount of contrast color, or tone, in the background behind the white, unburned areas of the leaves, a curled line or circular stroke is used with a quick, flowing motion. Faster movements with your tool tips burn very pale shades of brown. I found it easier to turn the board upside down for this step.



- 8 When the burning is complete, erase any remaining pencil tracing lines and lightly sand. Although the heat setting was never changed during this exercise, you can create a wide variety of brown tones with just the speed of the movement of your burning tip.

Light and Dark Exercise Three: Layers of Strokes

The light and dark areas in the design *Ivy Line*, pattern here, were created by adding layer upon layer of burned strokes to the areas (see **Figure 2.32**). The number of layers determines the lightness or darkness of each element within the pattern. The simplest stroke for layer work is the tightly spaced crosshatch pattern (see Squares 24–32 here). Here, straight lines are laid down with all of the lines in that layer going in one direction. With each new layer the lines are burned in a new direction. I used a medium heat setting for this exercise.

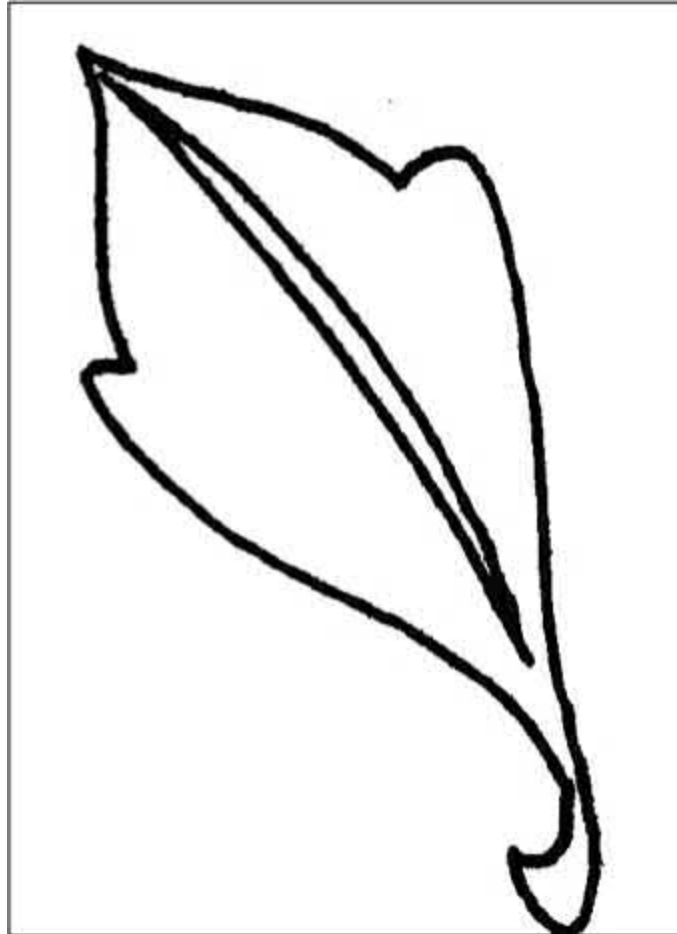


Figure 2.32. *Ivy Line.* How many layers of texturing you choose to burn determines how dark an area will become.

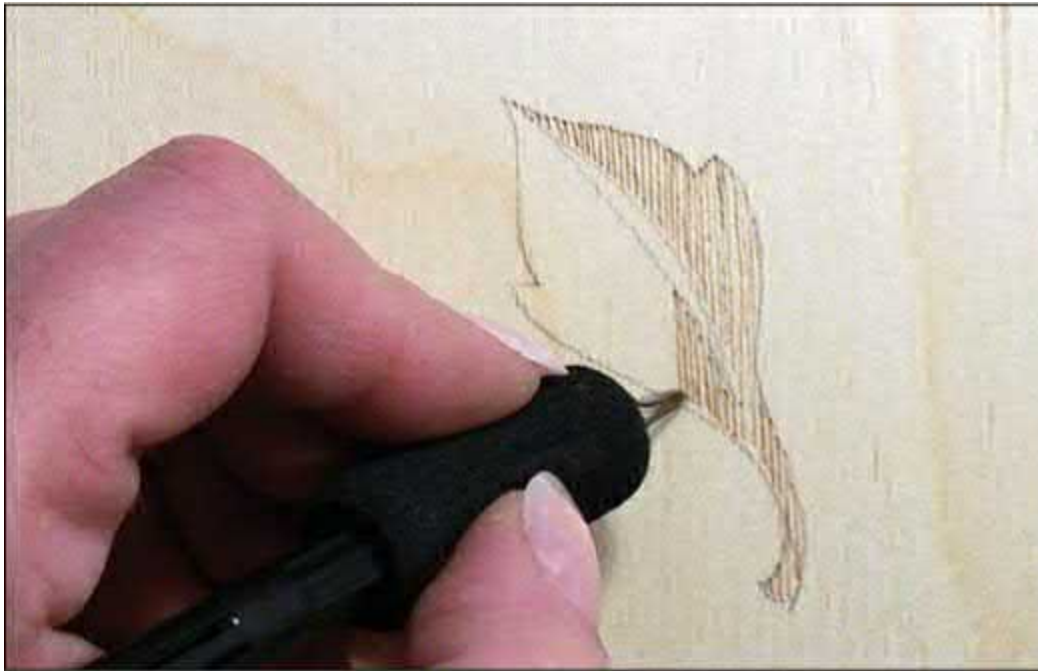
Layering can easily take an area from very pale linen tones to the darkest tones of black.

Tips for completing the entire pattern:

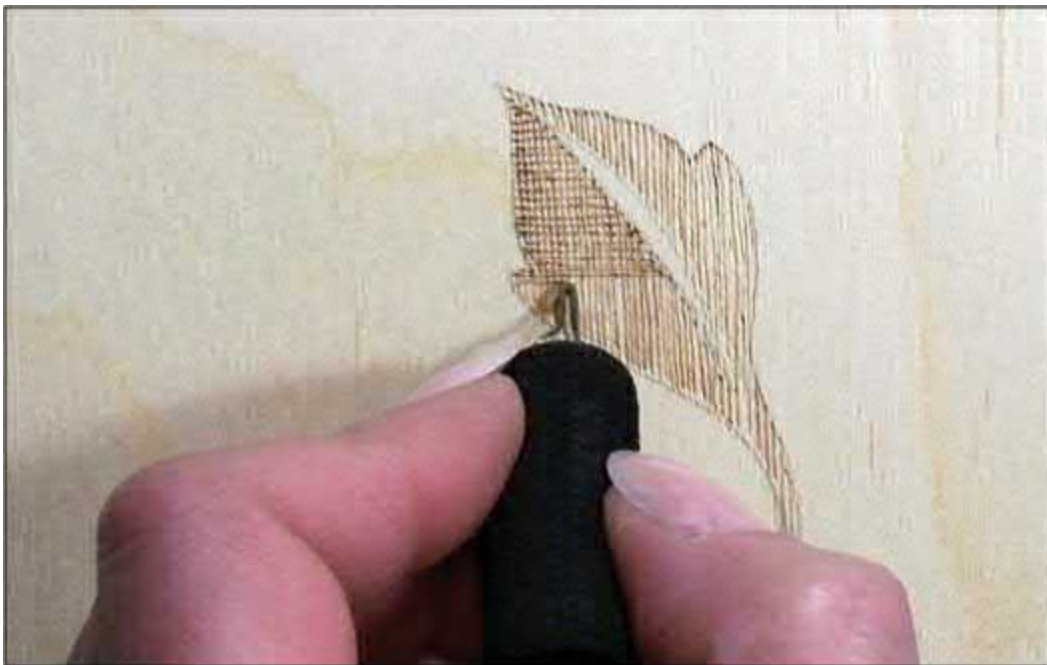
- *Ivy Line* has four different shades of light and dark: There is a very pale set of leaves that uses one layer of lines (1), the medium-colored leaves use two layers (2), the darkest leaves use three layers (3), and the borderline is done in a short-line fill texture (4). This design is not outlined.
- The borderlines are burned using tightly packed spots (see Square 56 here).



- 1 A simple ivy leaf pattern is perfect for learning to use layers of burning to create tonal value changes in a project. Add this small design to your practice board.



- 2** Begin burning tightly packed parallel lines into both sides of the leaf pattern at a 45-degree angle to the design (see Square 24 here). Space your lines evenly as you work. Notice in the sample that the width of the unburned wood is about the same size as the width of the burned line. Start each line at the top of the pencil tracing line and pull it until it touches the bottom tracing line of that section of leaf.



- 3** On one side of the leaf, burn a second layer of tightly packed parallel lines. These lines should run 90 degrees to the lines in your first layer of burning (see Square 25 here). Notice that this second layer makes that side of the leaf darker in tone than the other side.



- 4** A third layer of tightly packed parallel lines has been burned into the dark side of the leaf. This layer is worked at a 45-degree angle to the previous layer (see Square 26 here). You should have two very different colors, or tones, of brown in the two sides of your leaf when you are done with the third layer.



- 5** When the work is complete, erase your pencil lines and lightly sand. Changing the number of layers you burn with crosshatching is a simple and foolproof way to create different tonal values.

Light and Dark Exercise Four: Texture Pattern

So far in our practice projects we have used straight lines, crosshatching, random curls, and the short-line fill stroke, but any pattern of burning can be used to create the dark and light areas in your woodburning design (see **Figure 2.33**). For *My Room Gingerbread Man*, pattern here, I chose to burn the background areas using three capital letters: A, B, and C (see Square 46 here). Be creative with the texture pattern that you choose for this project. This pattern could easily be done by using 1, 2, 3 or by using a child's name, such as "AMY" or "JEFFREY." The words "My Room" could also be replaced with your child's name. I used a medium setting for this exercise.

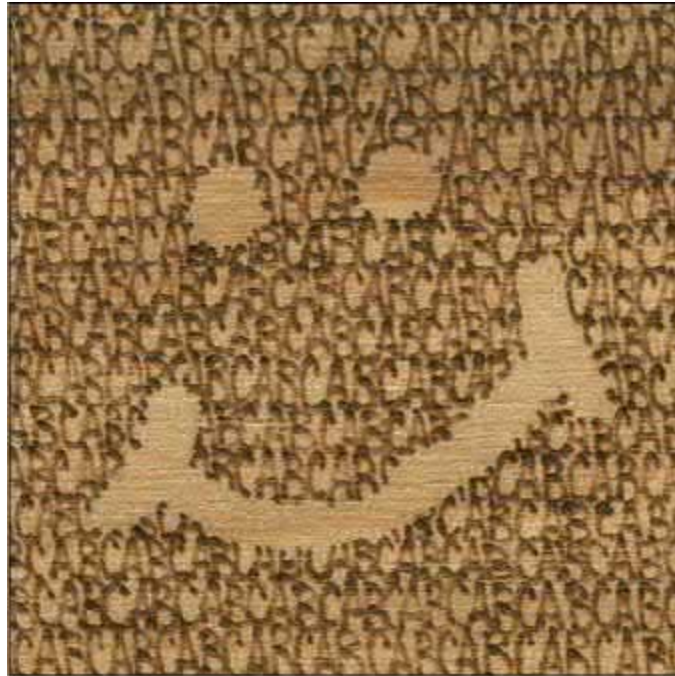
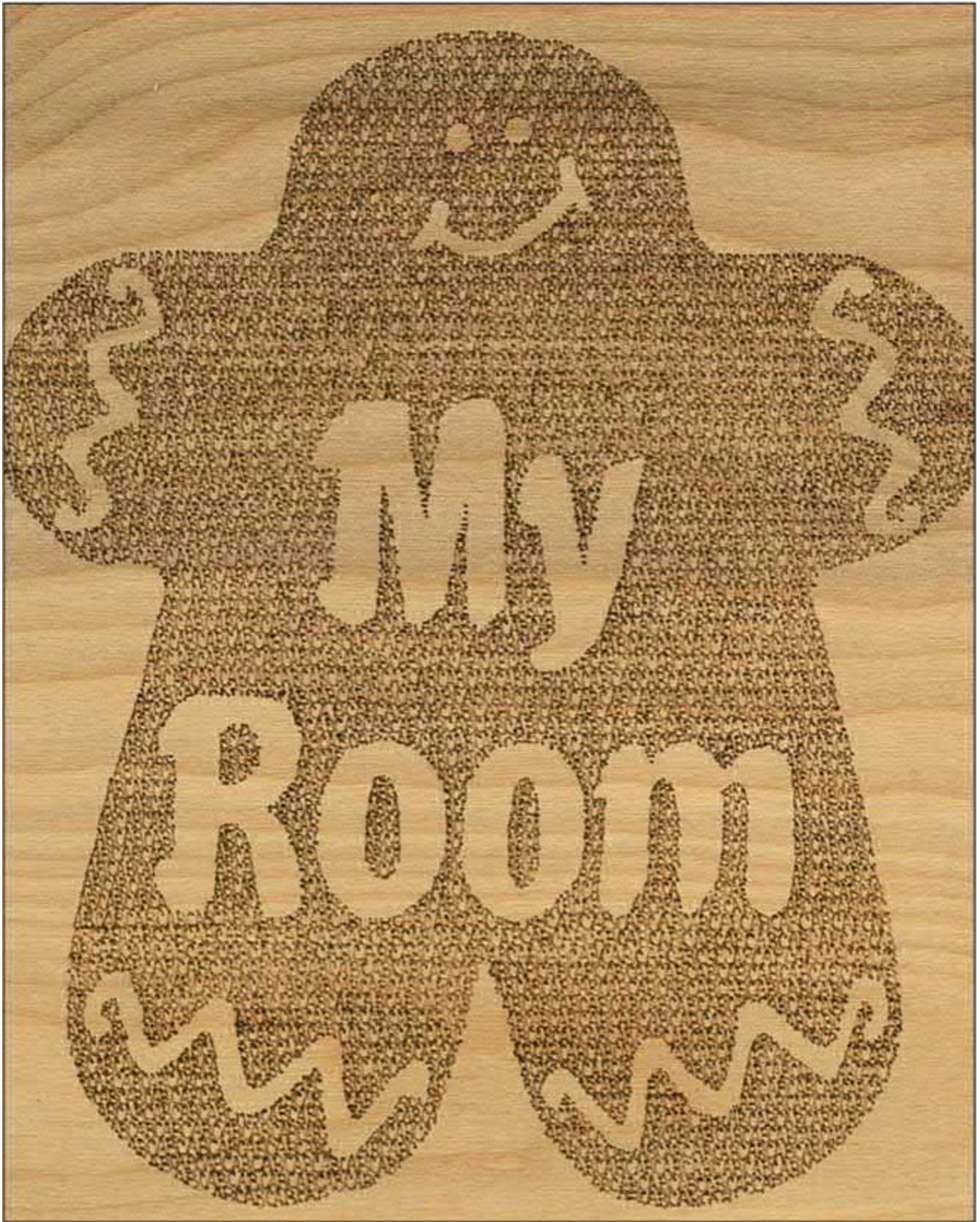


Figure 2.33. *My Room Gingerbread Man*. Not only has this design been worked with an unusual texturing pattern, it is also done as a negative pattern, or negative image. The woodburning has been worked to surround the main elements (the lettering and face) of the pattern and therefore make the unburned areas of the gingerbread man stand out.

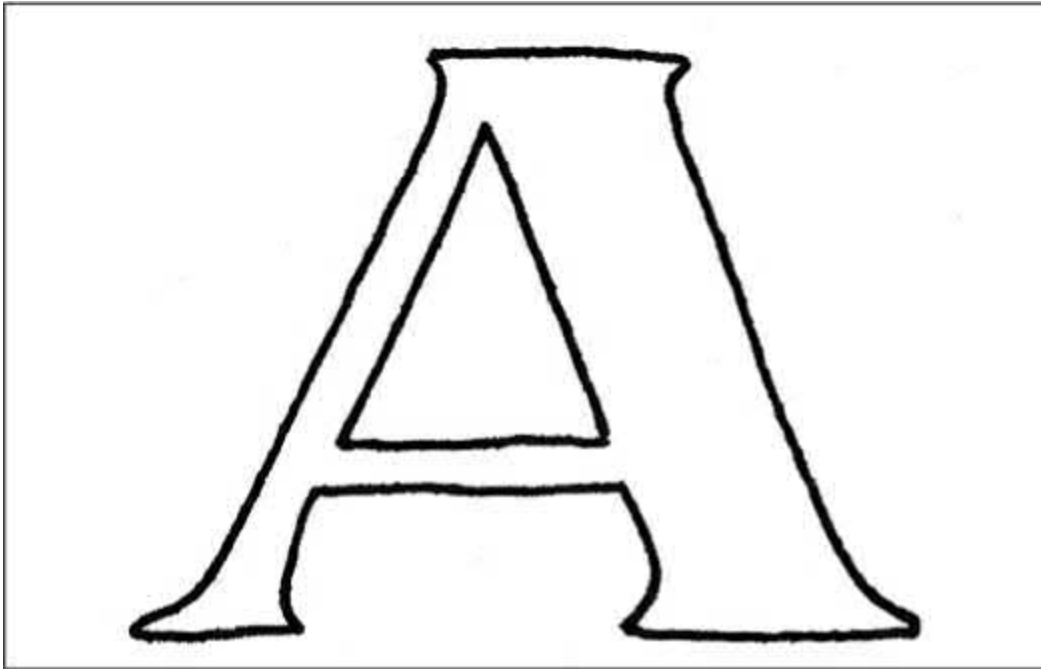
The *My Room Gingerbread Man* pattern is too detailed to practice just a part, so we will practice the negative space technique with the letter A. In order to form a negative element, shading must be especially dark on the borders of the object to emphasize and define its edges. I chose random curls for this exercise, but you can choose any fun texture you want!



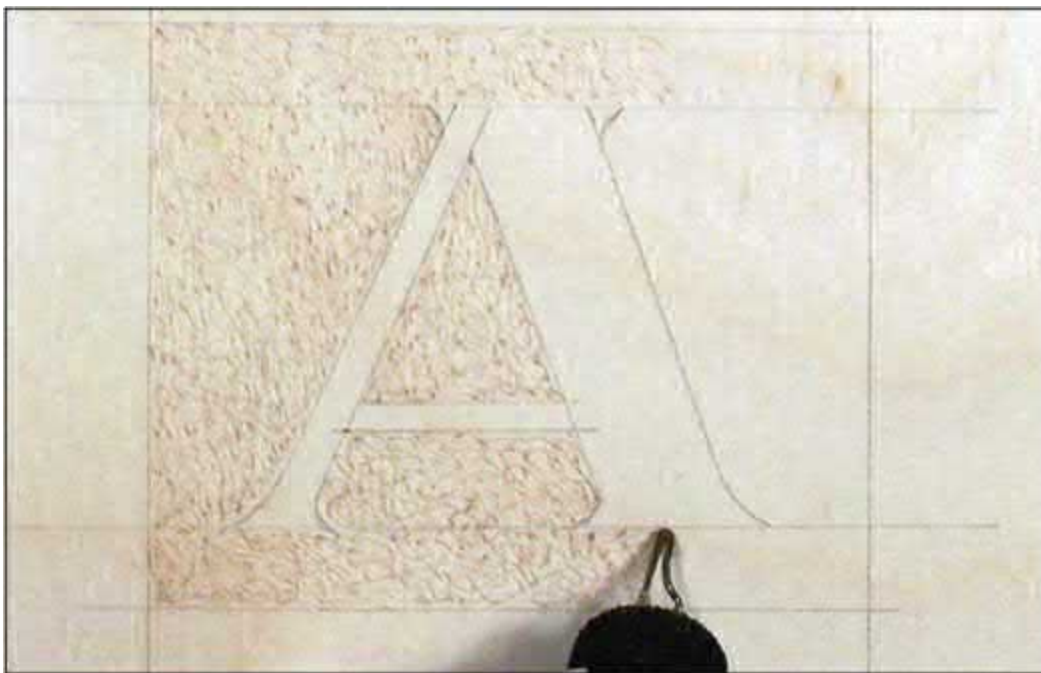
Tips for completing the entire pattern:

- Although I have burned my sample on a piece of birch plywood, this particular pattern would be delightful done on a gingerbread man cut-out shape or a door hanger sign.

- Using a T-square, ruler, and soft #4B to #6B pencil, mark guidelines across the wood for your letter placement. Since this pattern is about 12" (30.5cm) tall, I used a spacing of 1/8" (3.2mm).
- When you reach an area on the inner design—the eyes, mouth, icing trim, or words “My Room”—stop burning. Notice with this pattern that the woodburned areas are used to surround the actual important elements of the design.



- 1 Add this small pattern to your practice board.



- 2 Working with any of the three techniques that we are discussing in this section—temperature, burning time, and layers—begin to shade in all of the space surrounding the letter A to a pale or light tone of brown.



- 3 As you work, darken the areas that are nearest the letter *A* to a medium tone. Notice how the letter begins to stand out from its background even though you have done no woodburning to the letter itself.



- 4 Your darkest tonal value of brown should be where the background directly touches the letter. Don't outline the letter; instead, darken the background.



- 5 Erase your guidelines and pattern lines, and then lightly sand the surface. Dark tonal values can make unburned or unworked areas of your project stand out against their brown backgrounds. Dramatic changes in tonal values create a striking finish for a pattern.

Light and Dark Exercise Five: Putting It All Together

In *Buffalo Skull Dream Weaver Circle*, pattern here, I have put all of these methods together to create a work that has several points of interest (see **Figure 2.34**). The first thing that you may notice is the dramatic changes in shading. The paleness of the buffalo skull is balanced by the extremely dark surrounding circles of the dream catcher. Second, each area of the woodburning has its own texturing stroke. Because this exercise includes so many different textures and techniques, we will be working with the whole pattern instead of using a portion of the pattern as we did with the previous exercises.

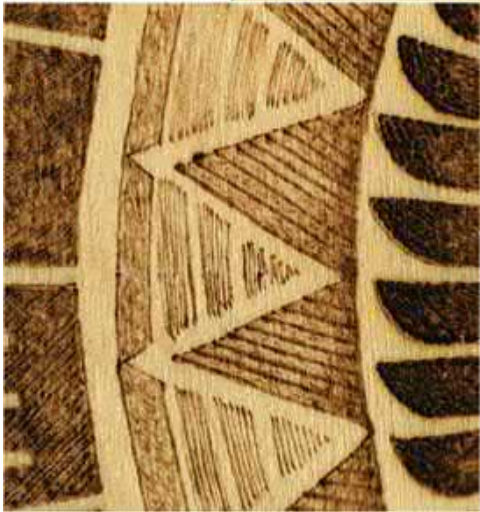
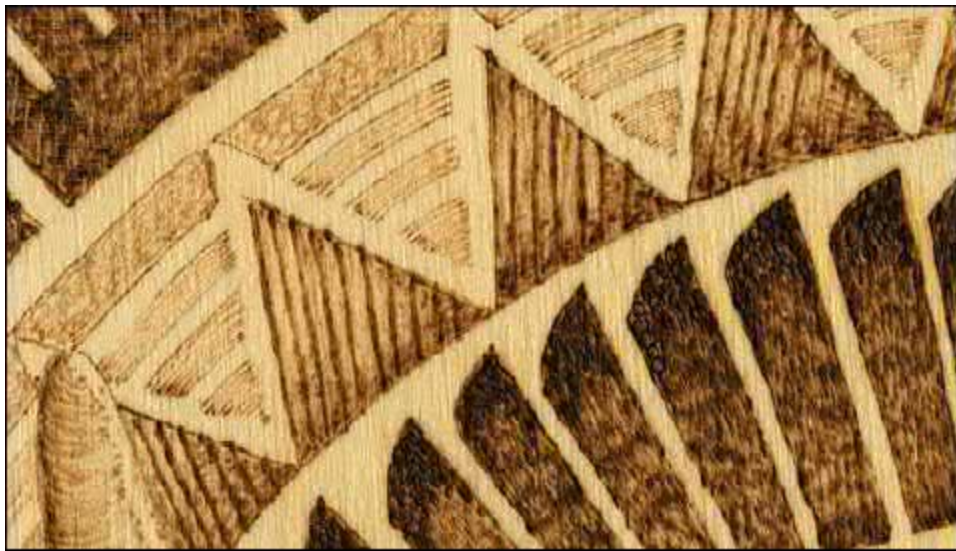


Figure 2.34. *Buffalo Skull Dream Weaver Circle*. Most woodburning patterns use temperature, time, texture, and layering to create distinct tonal values. The *Buffalo Skull Dream Weaver Circle* is an excellent pattern to practice and experiment with the four ingredients.



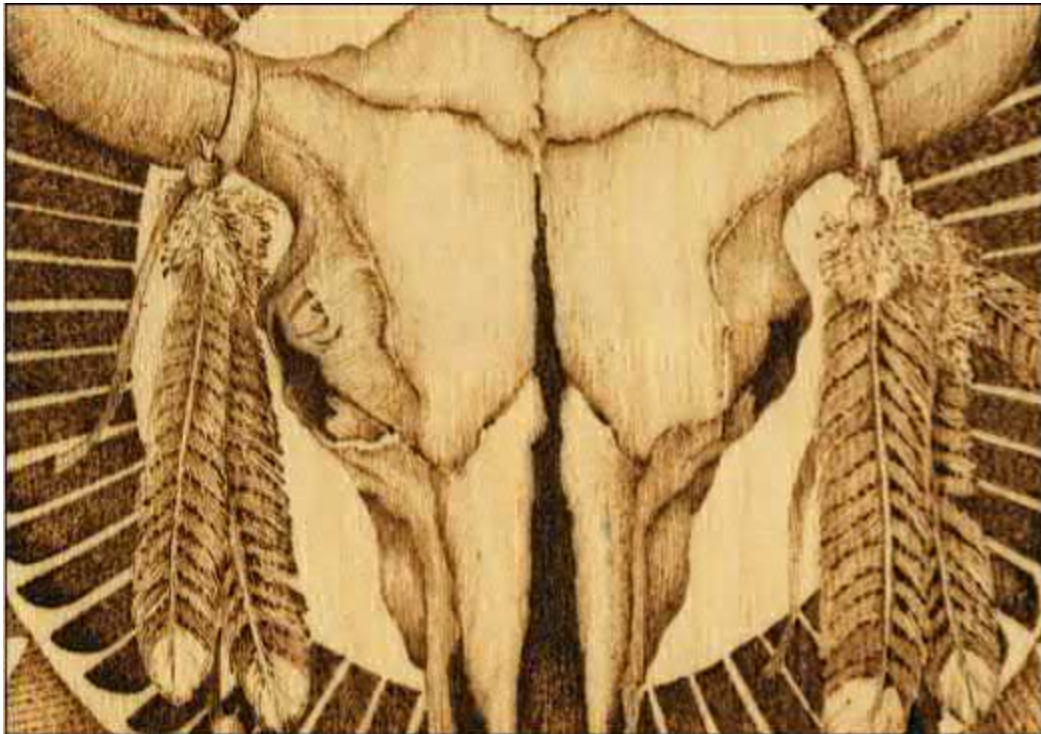
- 1 The outer ring was created by using tightly packed, 2 straight, diagonal lines; a medium-high temperature; and a slow rate of movement. Several layers of this stroke were burned until the area had a dark, even coloring.



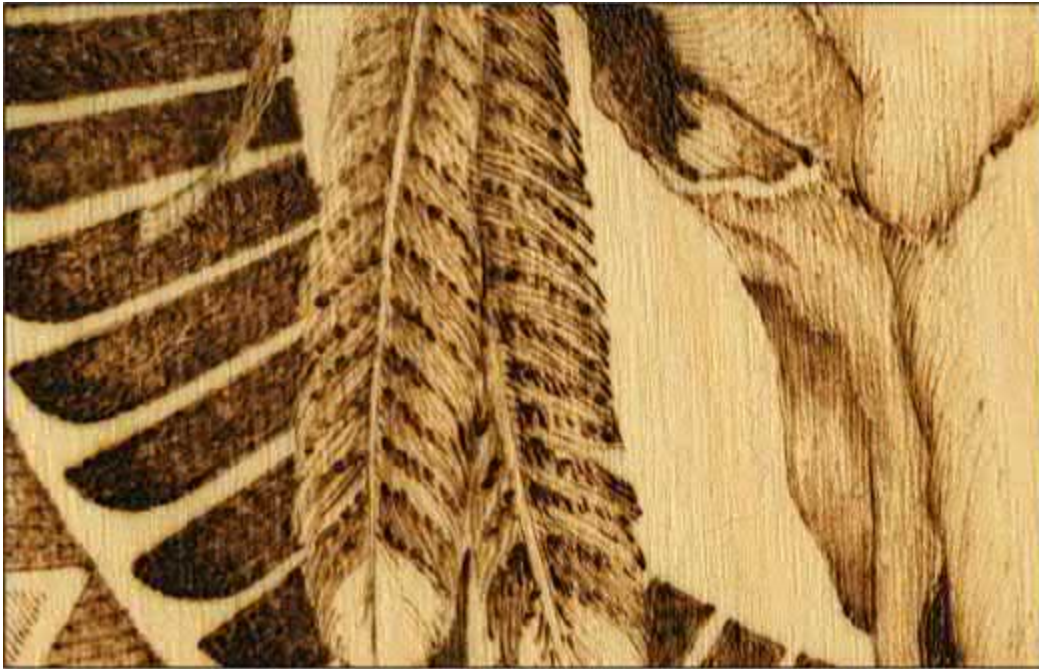
- 2 The next ring is made of short straight-line fill strokes (see Square 66 here) on a medium temperature and with a medium time for burning, while the inner sections of this pie-shaped wedge are straight lines. The inner pie wedges were first darkly burned with widely spaced, straight, diagonal lines (see Square 15 here). Then, layers of random curls (see Squares 33–37 here) were applied over the lines. Once a medium-dark tone was achieved, one more layering of random curls was added along the inner edge of the circle to deepen this line.



- 3 The last ring is made up of feather-shaped curved-line strokes (see Squares 69–70 here). These were burned at a high temperature setting and with a small dash stroke pattern (see Squares 1–5 here) by letting the tool tip rest for a moment to create the dark tone. Along the outer edge of this feather shape, a second layer of dash stroke pattern was added to darken the tips to a black coloring.



- 4 The buffalo skull design was burned using a fine-line texturing at low temperatures. This work is very similar to the work in *Our Daily Bread*. Layer upon layer of fine lines were added to darken the shadows of each area, giving the skull a three-dimensional finish. The black areas within the skull are filled with the small-dot pattern at a high temperature until these areas are as black as the inner circle feather shapes.



- 5 The feathers that hang from the buffalo's horns are done in short curved-line strokes (see Square 70 here). A central line to the feathers was first burned, and then finer lines were added, working from that centerline out toward the edge of the feather.

Texture Exercise One: Putting Textures Together

This *Solar Flare Sun Face*, pattern here, is a fun pattern to try if you want to explore the multiple textures that you can use in woodburning (see **Figure 2.35**). To add to the fun look of *Solar Flare Sun Face*, I chose a very grain-sculptured piece of heartwood birch plywood for the project. Not only is the sun face full of changing patterns and textures, but so is the unburned background because of its dramatic graining. Try this design using the texture patterns that most interest you from the practice board, as well as experimental texture patterns of your own! Here again, we will be working with the whole pattern instead of using a portion of the pattern as we did with the previous exercises. I used a medium heat setting throughout this exercise.



Figure 2.35. This design, *Solar Flare Sun Face*, uses eight distinct textures: crosshatching, dash strokes, wavy lines, random curls, seashell circles, herringbone, diagonal lines, and detail outlining. This was all worked on heartwood birch plywood, which adds more texture to the finished design because of the changing grain pattern in the wood.



- 1** For my sample, I used tight-spaced crosshatching (see Squares 24–32 here) to establish the shadows and shading in the face. Adding more layers of crosshatching created the darker facial shadings.



- 2** Touching the tool tip to the wood to burn tightly packed, small dots (see Square 56 here) gave the eyes, nostrils, and mouth the black-chocolate coloring. 1 2



- 3** The wavy-line texture (see Square 42 here) was used to create the sun face's mustache. Over this texturing, a light layering of random curls (see Squares 33–37 here) made the mustache darker where it touched the bottom of the nose.



- 4 The diamond shapes that surround the sun face were filled with the seashell circle texture (see Square 43 here).



- 5 The sun flare leaves have a herringbone straight-line burn (see Square 53 here) worked from the centerline out toward the flare's edge. Detail lines were first burned into the curling flares that make up the hair. Over this detailing, random curls (see Squares 33–37 here) were laid to create the shading. New layers of random curls were burned to darken these flares where one flare tucked under another. The stars were filled in with two layers of diagonal lines.



6 Once all of the texturing and shading were completed, I added the outline burn to each element.

Composition of a Good Woodburning

Tonal values can be used to give one element or area of a woodburning more emphasis than the rest of the design. Areas of sharp tonal value contrast attract the eye whereas areas that are close in tonal value do not. By adding sharp contrast—like white values directly touching the blackest values—you pull the eye to that area of your work. If instead you burn an area with very similar values, whether they are all dark values or all pale values, that area becomes less noticeable.

In a landscape that contains a background, middle ground, and foreground, those elements that are contained in the background will be very similar in pale value. There will be little or no color difference between your mountains, sky, and distant tree lines. As you move forward in the landscape to the middle ground, the barns, roads, and fields in this area will move into the medium tonal values. These medium values will encompass a wider range of values, from beige through light brown, than the limited range of the pale background tones. It is not until you reach the foreground that you find distinct shades of black and white within the elements and definite shadows cast by those elements. The foreground of a woodburned landscape will contain areas of all of the tonal values from your palest white through to your blackest area of work. The foreground, therefore, has the widest range of tonal values in the work.

Very dark and black values have more impact than pale values. In any woodburning, your eye will find the blackest area of the work first. Making the most important element of the pattern also the darkest will force that element to stand out from its surrounding area.

The Harrisburg Star Barn shows how you can focus the attention of your woodburning scene by controlling the use of your tonal values (see **Figure 2.36**). Notice in this work how your eye goes directly to the barn; yet the areas behind the barn, the cloud bank, the areas in front of the barn, and the pond with the barn's reflection are just as detailed as the main barn. This happens because all of the burning in both the cloud bank and the pond reflection are very close in tonal values, so these areas become muted. There is no sharp contrast between light and dark in these areas.

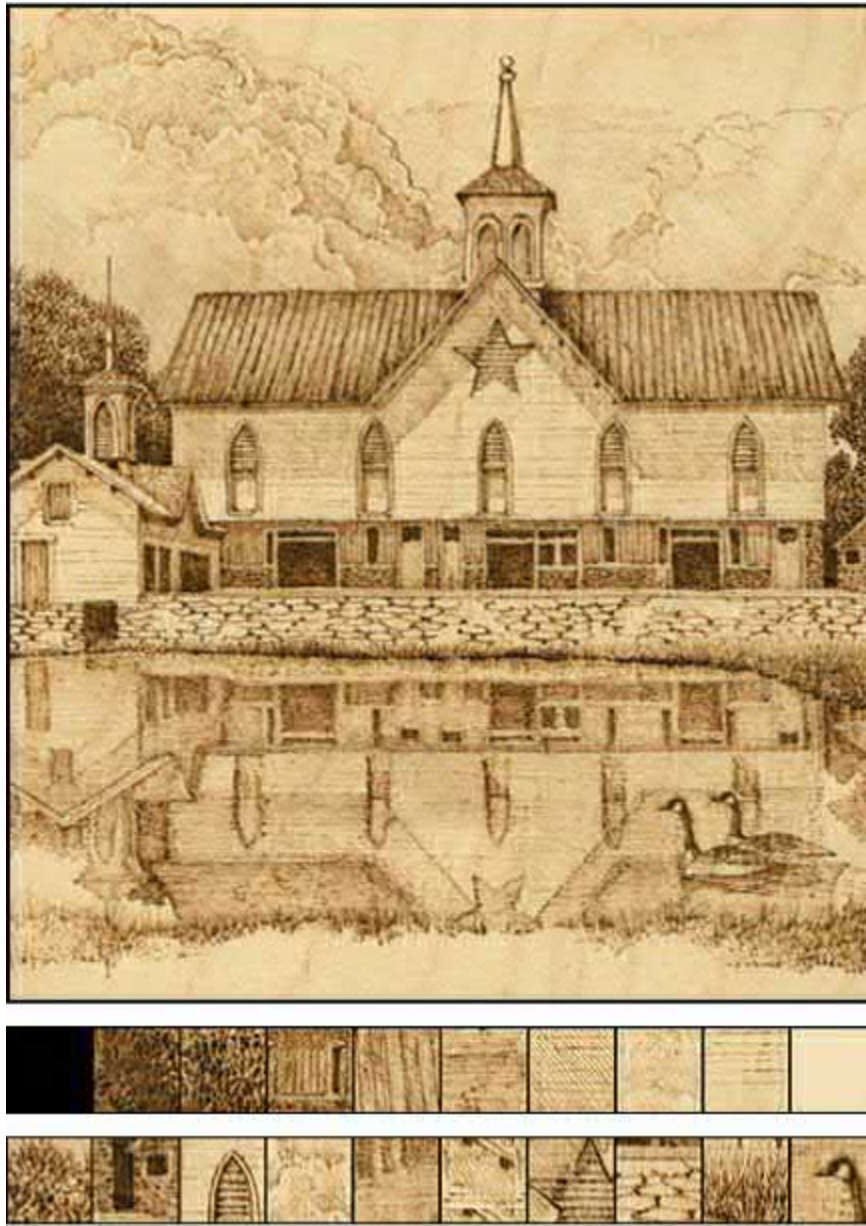


Figure 2.36. *Harrisburg Star Barn.* You can focus attention to one area of your design by using sharp contrasts between the light and dark tones in that area. The top row of squares shows samples cut from the burning of the tonal values that were used to create this work. You can see the progression from darkest to lightest value. The Star Barn's value range is compact with the changes between tonal values kept minimal. The bottom row shows texture samples and detailing from the burning.

The barn, however, has a very clear, distinct contrast between the white walls of the barn and the dark shadows of the open stall doors, barn overhang, and roof detailing. The eye naturally is attracted to areas of sharp contrast.

By eliminating any sharp contrast in the clouds and the pond and by emphasizing the contrast in the barn, I have made the focus of this scene the barn structure. This technique—controlled use of your tonal values—is excellent for woodburnings that have a great deal of detailing.

Adding texture

Texturing adds to a woodburning by creating repeating patterns of interest throughout the work. *The End of the Road* uses a wide variety of texture patterns to establish different elements in the scene (see

Figure 2.37). Leaf patterns are repeated in both the foreground tree and the smaller background tree, while the pine needles of the spruce take on a new texture. When adding textured patterns to your work, continue those patterns within an element whether the tonal value is dark or light. Note on the foreground tree that the leaf texturing is done in both very pale tonal values and very dark ones. By varying the tonal values of those texture patterns, you can pull some of the leaf clumps forward with pale tones, tuck some of them into the middle section of the tree with medium values, and push some to the back into the shadows of the tree with darkly burned values.

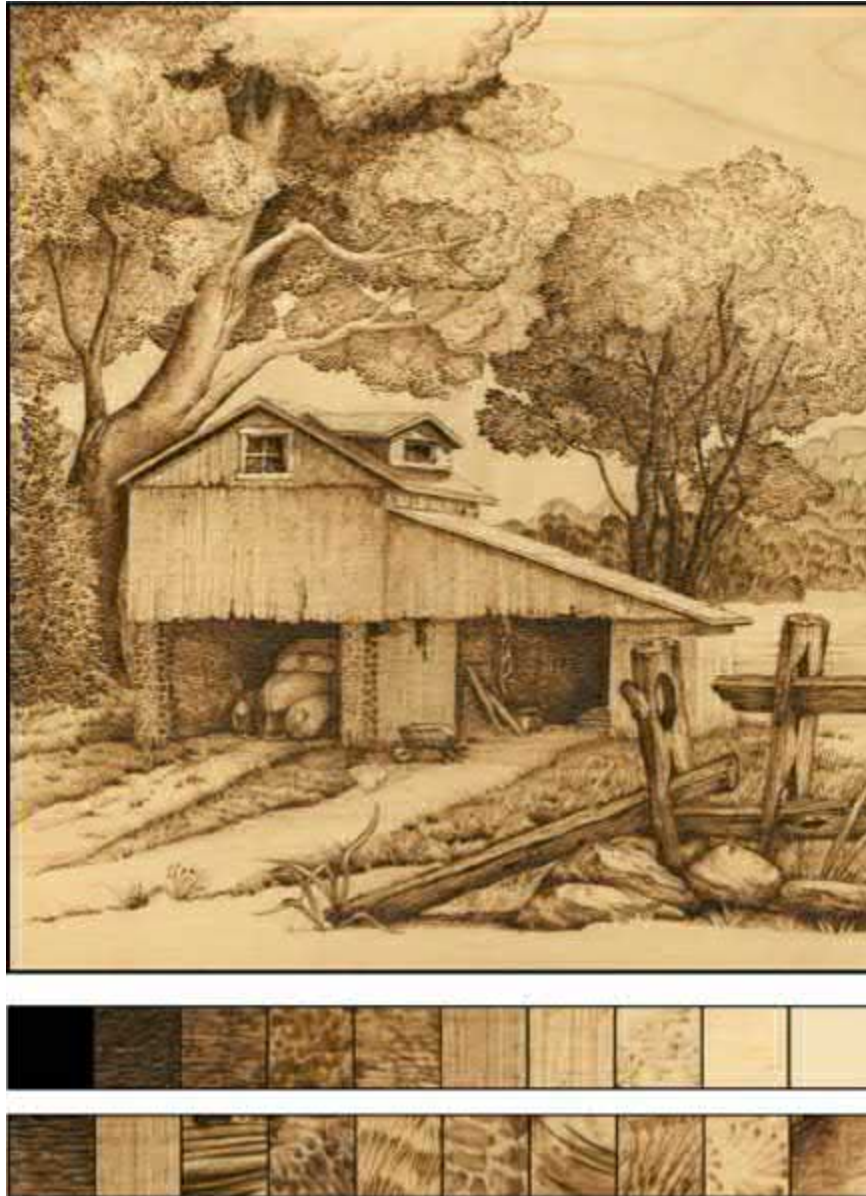


Figure 2.37. *The End of the Road.* Textured patterns can be used to establish the tonal values of light through dark. Textures also add interest because of their changing patterns. The value changes, top row, are more dramatic than those in the *Harrisburg Star Barn*. The darkest tone used is very close to true black. This design incorporated a wide variety of textures to create the tonal values, bottom row.

Creating shadows

Shadows are created when light comes into contact with a solid element in the design. Since the light cannot pass through the object, there is an area of darkness on the opposite side of the element from the

light source.

The tonal value of a shadow is determined by where it falls within the still life or landscape. Middle ground elements, for example, cast medium-valued shadows as compared to foreground elements, which cast very dark shadows. You can create an impression of depth to still lifes and landscapes by including shadowing. Adding a shadow area, especially in the foreground of a design, can eliminate the need to burn the ground, grass, or floor area of your design. Since a shadow must lie on the ground or floor, the shadow implies the ground area.

In *Hide 'n Seek* (see **Figure 2.38**), there is no woodburning where the ground should be. Instead, the ground line has been established by using only the shadow cast by the wagon.

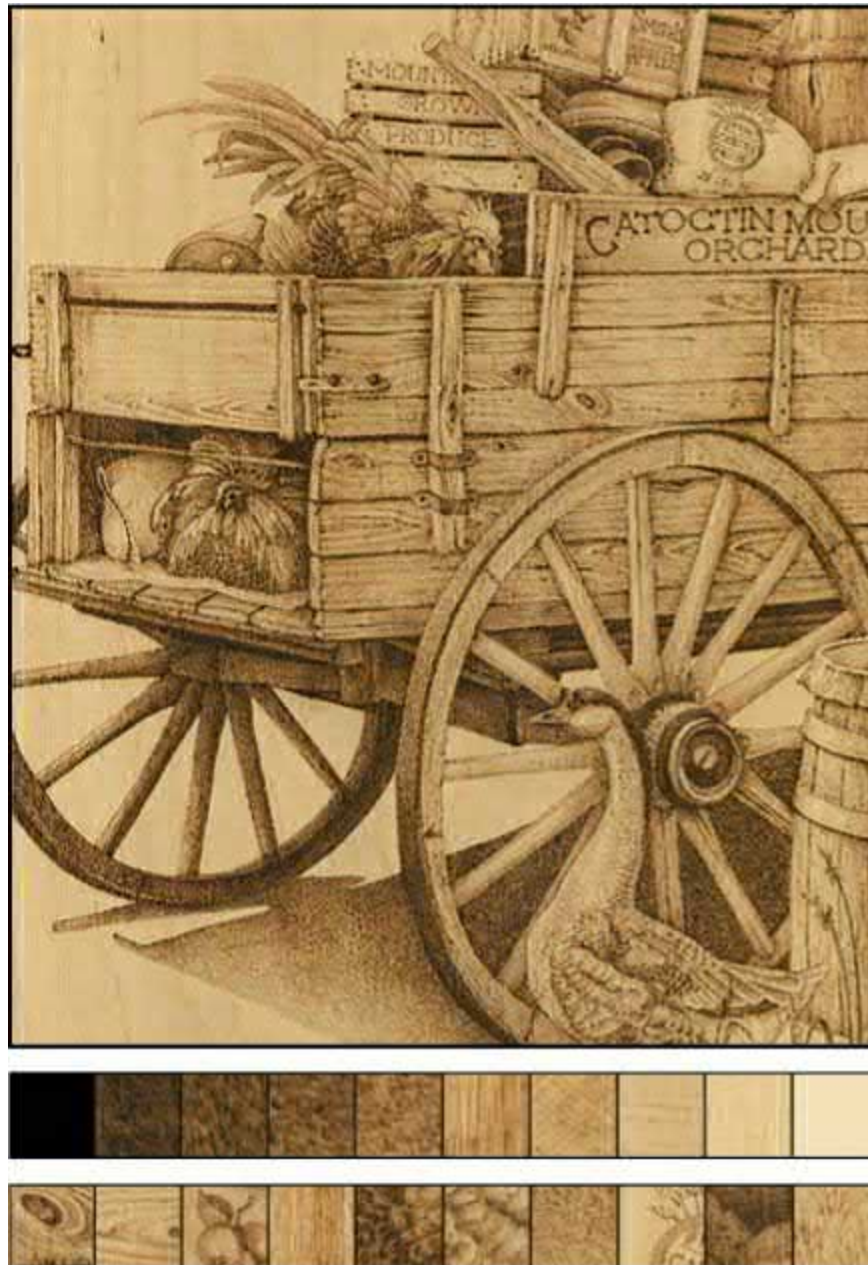


Figure 2.38. *Hide 'n Seek*. The shadow under the wagon gives the impression of ground without needing the details of rocks, grass, etc. Since shadows must always lie against a solid object, using a shadow in this way will give your project a background without too much effort. The range of tonal values in this particular shadow also gives more richness to the woodburning.

This particular shadow contains a range of tonal values. Where the shadow is closest to the light source—between the front wheels—that shadow is a mid-tone value; but, where the shadow disappears under the wagon, it becomes the darkest value in the work. Using shadows can eliminate the need to detail or outline each and every object in the original drawing.

Using multiple techniques

Grandpa's Pride and Joy uses tonal values, focuses attention, has different textures, and uses shadows (see **Figure 2.39**). It contains a wide variety of tonal values, from extremely black areas to large areas that are nearly the tonal value of the birch plywood. Texturing is used throughout the scene to establish different elements. The leaf texturing is repeated in each of the trees; the grass texturing is the same for the background grass as well as the foreground clumps. A heavy shadow under the front bumper of the old car is used to create the idea of foreground grass, and the light value in the upper tree leaves is allowed to fade away into the unburned wood, implying more leaves. Finally, this scene uses the idea of sharp contrast in the car and foreground tree versus muted contrast in the background barn scene, thus focusing the viewer's attention on the old, rusted car.



Figure 2.39. *Grandpa's Pride and Joy.* This burning uses texturing to create the different tonal values. The top row of squares shows how dramatic the tonal value changes are. The darkest value in nearly true black creates the strong contrast to the unburned birch wood. This pattern does not use a large variety of texture, bottom row; instead, the emphasis of the work is on tonal value contrast.

Outlining your design

Outlines are excellent for defining an area, especially when two touching elements are very close in tonal value or shading colors. They also give strength or importance to an area. For example, outlining

some of the petals of a flower will bring your eye to those petals quicker than to those that are not outlined. Be cautious using an outline in your design. If you outline too much, the work will take on a coloring book look. Use just enough to accent the work and not overpower the design.

There are some designs that will use outlines along the edges of each element in the pattern. In general, the more stylized the design, the more outlining you will use. *Summer Morning Sun Face* is a very stylized pattern that can easily be adapted for a bold outline stroke (see **Figure 2.40**). Adding an outline stroke is best done after the shading and texturing have been completed and by using a medium temperature setting.



Figure 2.40. *Summer Morning Sun Face* is a stylized design easily adapted for a bold outline stroke.

In this first sample of outlining, all of the traced pattern lines have been burned using a high temperature (see **Figure 2.41**). As you look at the outlines, you will see small spots of darker coloring in the lines (see **Figure 2.42**). These spots, or bubbles, are caused when the tool crosses from one grain line

to another. Instead of a nice, straight, even line, you end up with a connect-the-dot appearance to the work. The more tightly packed the grain lines are in the wood surface, the more bubbles you will have in your outlining.



Figure 2.41. All of the traced pattern lines have been burned using a high temperature.

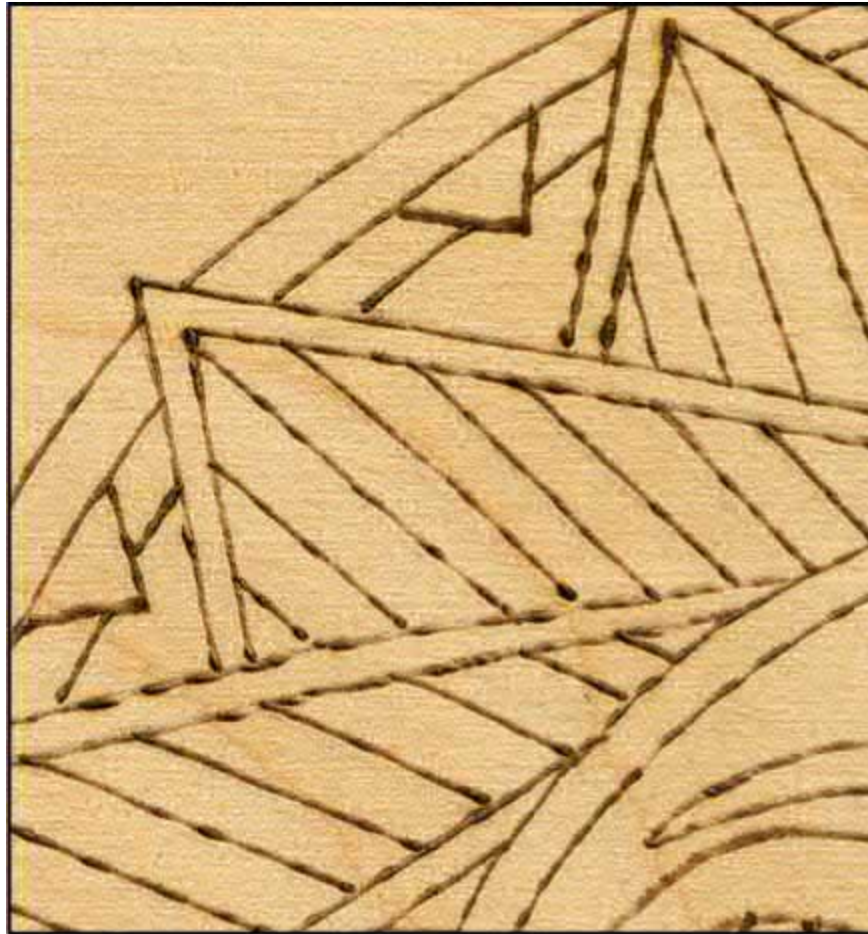


Figure 2.42. When adding an outline stroke, be sure to complete the texturing and shading first. If you do not, the unsmoothed wood grain will cause small spots of darker coloring when the line crosses from one grain line to another.

Here is the same pattern burned, but this time the outlining was done after the shading and texturing were completed (see **Figure 2.43**). There is still some bubbling along the outlines, but it has been greatly reduced in size and number. This is because the earlier work of shading and texturing broke down the wood fibers, thus reducing the effects on the wood grain. Using a medium temperature for the outline strokes and burning several layers to the line give you greater control over your outlines.

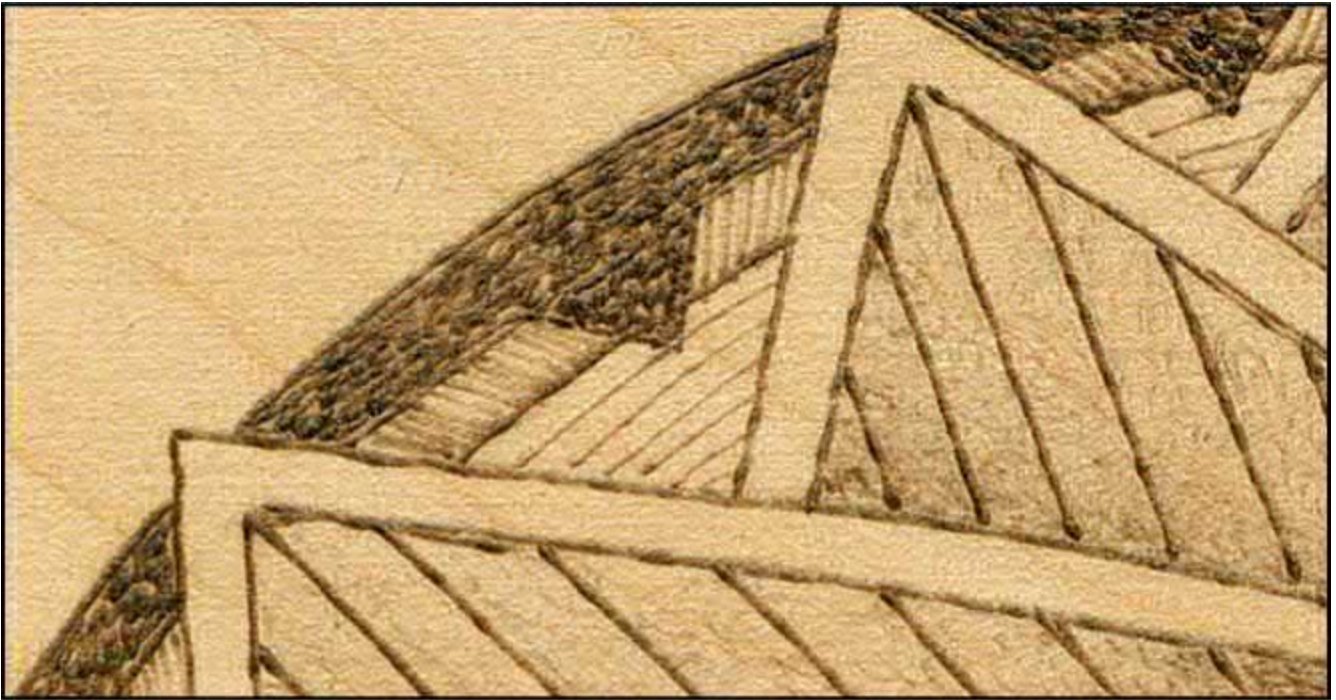


Figure 2.43. Here the outlining was done after the shading and texturing were completed. This method greatly reduced the spots.

Single Briar Rose has the appearance of outlining, yet very little line work was added after the pattern had been shaded and textured (see **Figure 2.44**). The outlines, or accent lines, that the pattern does have are along the left side of the stems and along the curved cutouts within each petal of the rose (see **Figure 2.45**). The feeling that each area has been outlined was created when the shading was applied. A woodburning stroke naturally begins with a darker tonal value at the start of the burn and a lighter tonal value toward the end of that stroke. Remember, this effect occurs because the tool is hottest when it touches the wood surface at the beginning of the stroke. As you pull the tool across the wood to complete the stroke, the tool tip begins to cool very slightly. This lightens the end of the burned stroke. By beginning each of the burning strokes along the pattern line—in this sample, I began them at the outer edge of the petals—I have used this dark-to-light tendency to my advantage.



Figure 2.44. *Single Briar Rose* has the appearance of being outlined even though it does not actually have burned lines for each of the tracing lines.



Figure 2.45. The outlines, or accent lines, that the pattern does have are along the left side of the stems and along the curved cutouts within each petal of the rose.

Where you start a burning stroke determines where your darker shading for that line will be. On the leaves of *Single Briar Rose*, I began the burn strokes along the center vein of each leaf and pulled outward toward the leaf edge. Notice how this darkens the leaf centers, accenting the central leaf vein.

There are times when I will outline a more realistic pattern at the beginning of the woodburning process. If the pattern is extremely detailed and I will be working on it over an extended period of time, I will outline the general element lines of the design before any other work is done. So if my design is a barn landscape, I will outline the barn walls and roof but not every individual barn wall board or roof shingle. This general outlining is done in a very pale tonal value using a low setting on my thermostat. If during the working process some of my pencil tracing lines become smudged or need erasing, I still have the general outline set to use as a reference guide. Because some projects get set aside for a time period before you are able to complete the burning, this general pale outline ensures that your pattern lines will still be there when you get back to work. By working this outline in a very pale value, I can do darker value shading and accenting right over the outline work. As I work the tonal values of the rest of the design, the pale outline often disappears into the finished woodburning.

Not every element must be burned

Just because a pattern includes line detail, it is not necessary to burn every single line or element within the design. Woodburning is a wonderful medium for fine details; however, an image can quickly

become overpowered when there is too much for the eye to see. Leaving some areas unburned, and therefore open to the imagination of the viewer, adds to the composition of the work. Unburned or unworked parts within a design give the viewer contrasting areas to compare to highly detailed elements.

In this burned portrait, *Western Horse*, there is a large amount of detail work in the braided bridle and in the shadowing around the forehead, eye area, neck, cheek, and lower jaw (see **Figure 2.46**). These areas fall into a medium-dark tonal range. To balance this darkness, the top of the nose down to the mouth area, the forelock, and the ears have very little detailing, thus keeping these areas light in tonal value. By keeping the detailing in the light areas to a minimum, the face of the horse has an equal amount of lights and darks.



Figure 2.46. The detail work in the braided bridle and in the shadowing around the forehead, eye area, neck, cheek, and lower jaw fall into a medium-dark tonal range. To balance these darker areas, the top of the nose down to the mouth, the forelock, and the ears have very little detailing.

When the pattern was traced to the plaque, the horse's eye needed to fall along the centerline of the

wood. This pushed the neck and mane very close to the edge of the plaque. Had I detailed the mane area, it would have darkened this area, making the pattern visually out of balance. All of the dark areas would have fallen on the right half of the plaque and below the plaque's center point. The light areas would have all been above the center and to the left.

Only a few hairs of the mane were needed to establish the boundaries of this area. Leaving the rest of the mane with little or no detailing kept the finished work nicely balanced from the center of the wood.

Grandpa's Pride and Joy also has a large area of the pattern unburned (see **Figure 2.47**). To make the old, rusted car the focal point of the work, I burned it to medium-dark tones. The areas under the fender, under the bumper, and along the lower door edge are the darkest points of the piece and are layered to a deep shade of chocolate-black.



Figure 2.47. *Grandpa's Pride and Joy* also has a large area of unburned wood. The car was burned in medium-dark tones to make it the focal point of the work. The foreground section was left mostly unburned to provide contrast for the car.

To contrast these black areas in the car, I wanted the foreground grass as pale as possible. So the only areas in the foreground that I burned were the watering can, fence posts, and front tree. The grass areas in front of the car's bumper and front wheel were not woodburned, allowing these areas to remain the original color of the wood. The black edge under the front bumper provided enough information to

imply the foreground grass.

Protecting Areas from Woodburning

When it is important to keep areas from being woodburned, low-tack masking tape and drafting tape can be used to protect areas from low-temperature burnings (see **Figure 2.48**). In this sample, *The Country Church*, the areas surrounding the roof of the church have been masked to create a strong, crisp edge. The shading for the roof can now be added, allowing the tool tip to cross over the roof area onto the tape. When the burning is complete, the tape can be removed and the wood underneath the tape will be unburned. This is a good technique when you want to use a random texture, such as curls, for shading yet still desire a straight edge to the area being worked.

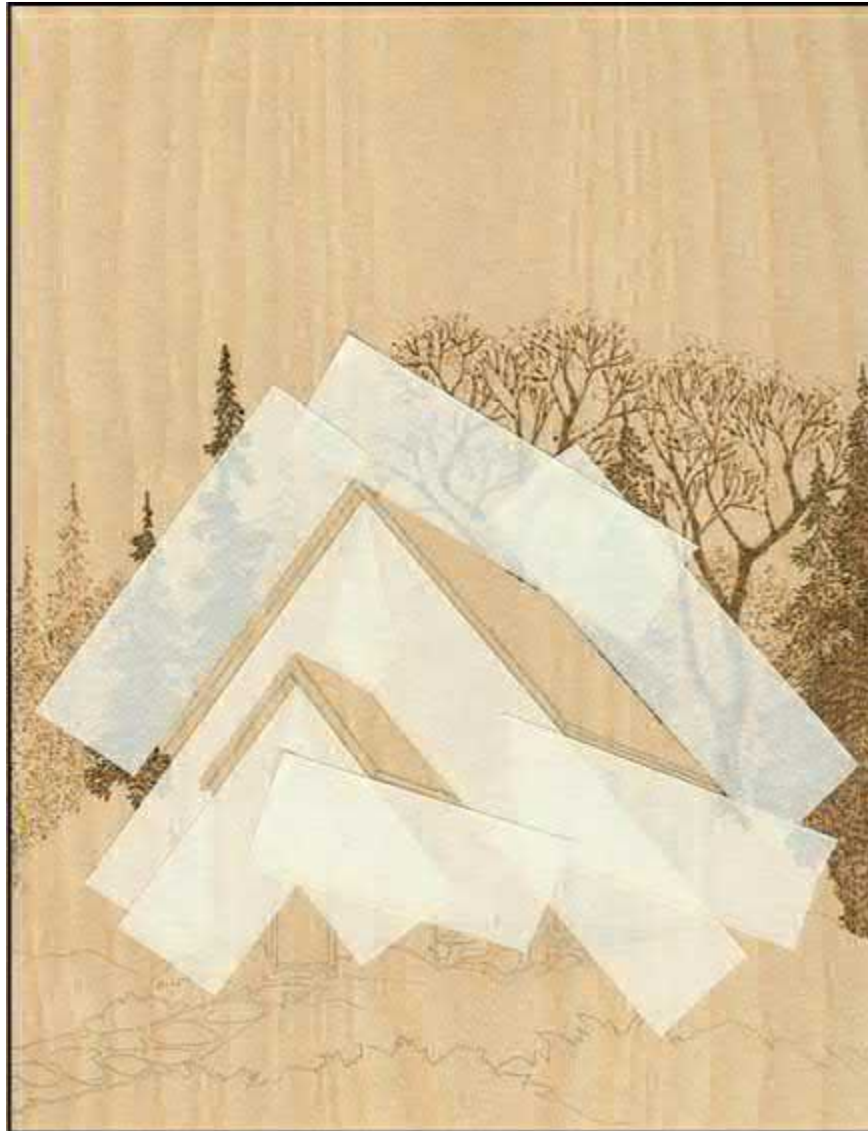


Figure 2.48. Low-tack masking tape and drafting tape can be used to protect areas from low-temperature burnings.

Be careful when using masking tape as a protective layer because it can lift small wood fibers where it is applied. It is advisable to first test the tape on a small corner of your project or on the back of the wood surface. Masking tape can take medium temperatures of burning; however, high temperatures will soften the tape's adhesive. The adhesive will need to be removed from the wood surface with a white artist's eraser or be rubbed off with your finger before that area is worked. Again, test this masking tape

technique on your wood surface before you use it on your project.

Shape versus coloring in a pattern

Each area or element of a design will have both shape and color. For example, the trees in an autumn landscape may be red, gold, and orange in color, but those same trees in a summer scene will be medium and dark green. However, the shape of the trees does not change because the season changes. So, the leaf clumps will still have a rounded feeling, and the tree branches will still go beneath, or into, the leaves. Knowing which parts of your design are shapes and which show color will help to create a more realistic woodburning.

The owl's feathers in *Horned Owl* come in a variety of shapes and positions all over this bird of prey (see **Figure 2.49**). Notice the fine half-circle feathers that make up the wing shoulder and compare them to the longer flight feathers lower on the wing. The feathers along the breast area and leggings are fine, fuzzy down. Each grouping, or clump, of feathers on this bird has a curved shape and casts shadows on other groupings of feathers depending on their position along the body.



Figure 2.49. Notice the different types of feathers that make up this image. Each group of feathers casts shadows on other groupings of feathers depending on their position along the body. Burn the shapes as a first step.

The feathers of the horned owl also have a variety of coloring patterns. The long flight feathers and tail feathers have dark-colored bars; the breast feathers have speckling and a dark spotting color. Those feathers that create the eye ring end with a dark band at the outer edge.

This can seem to be a large amount of information to try to capture in just one woodburning work. Dividing the image into working steps—one for shape, one for shadows, and the last one for color—makes the work much easier.

The image above shows the *Horned Owl* burned for the shape of each grouping of feathers and for the shadows those feather groups cast on other feathers (see Figure 2.70). Once the bird had a strong, three-dimensional form, the color bands and patterns were laid over top of the earlier work (see **Figure 2.50**).



Figure 2.50. The feathers of the horned owl also have a variety of coloring patterns, made up of dark-colored bars, speckling, and dark spotting. Burn the shape of the body, the head, and the wings first; then, add the color area burnings as a second step.

Therefore, by first woodburning the shape of each feather group, then adding the shadows, and finally adding the color information, *Horned Owl* becomes a very realistic burning.

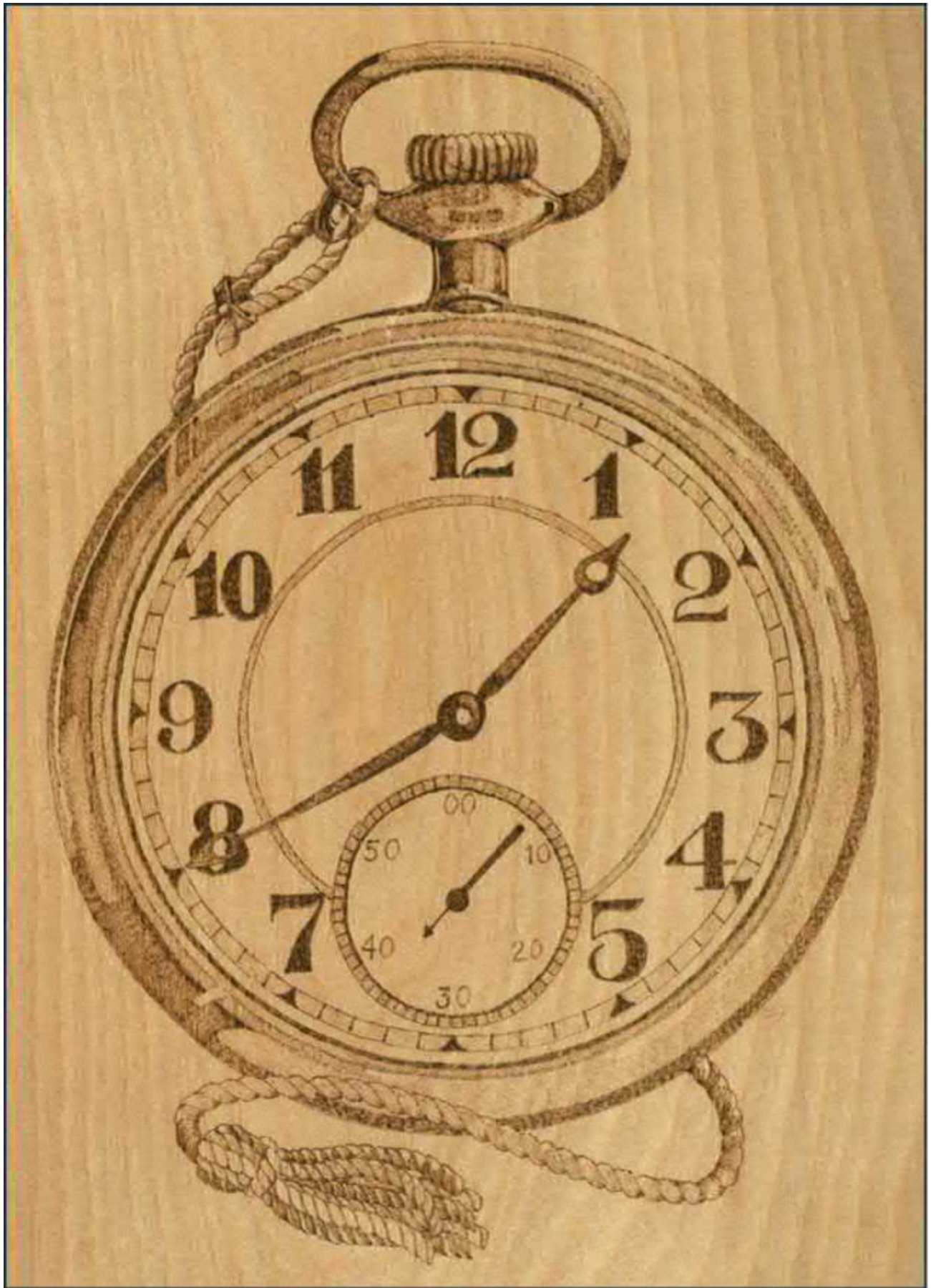
Tonal Value Project: *The Pocket Watch*

The Pocket Watch is perfect for learning more about tonal values. This design has been broken down into six steps: one for the outlining of the design, four steps focusing on one tonal value each, and one step for finishing.

The Pocket Watch measures 8" × 12" (20.3 × 30.5cm). My sample was worked on birch plywood using a variable-temperature tool and a writing tip, but you can use a one-temperature tool also. The thermostat temperatures were changed throughout this burning. The textures used in this project are shown on the practice board (see [here](#)). Throughout this step-by-step project, I will be showing the settings that work for me with my variable-temperature tool. You will want to adjust those settings to fit your practice settings chart according to the wood that you have chosen to burn.

This will be a very quick project because the face of the clock, the largest pattern section, is not burned. It remains the original color of the wood. As you work, focus on establishing four individual color tones and keeping those color tones the same throughout the design.

Although the finished piece was worked as a picture, this would be a delightful design made as an actual wall clock (see the [Creating a Real Wall Clock](#) section [here](#)).

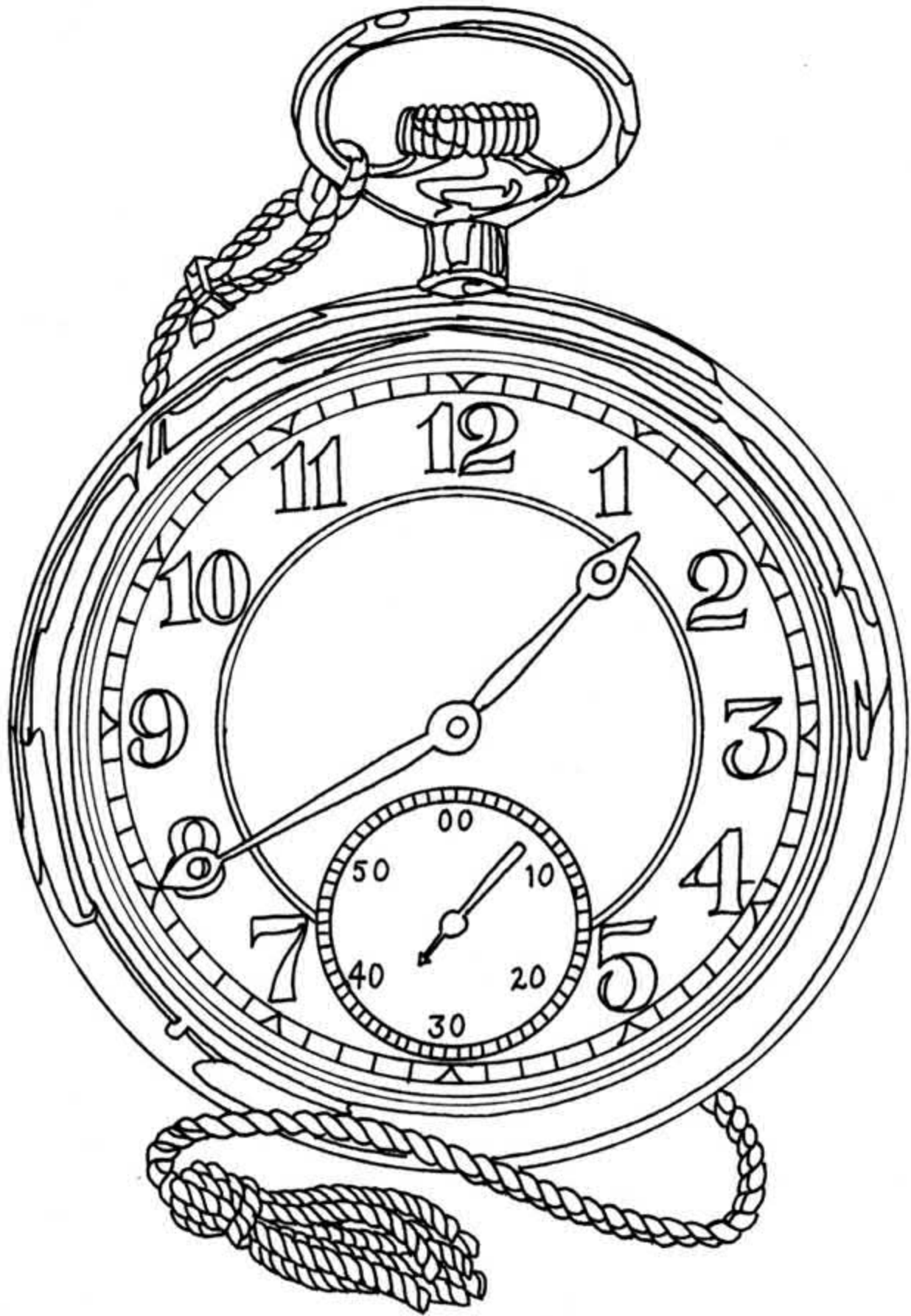


Tip: Writing tip or universal tip

Wood: White birch plywood, 8" × 12" (20.3 × 30.5cm)

Tonal values: Very dark, dark, medium, and light

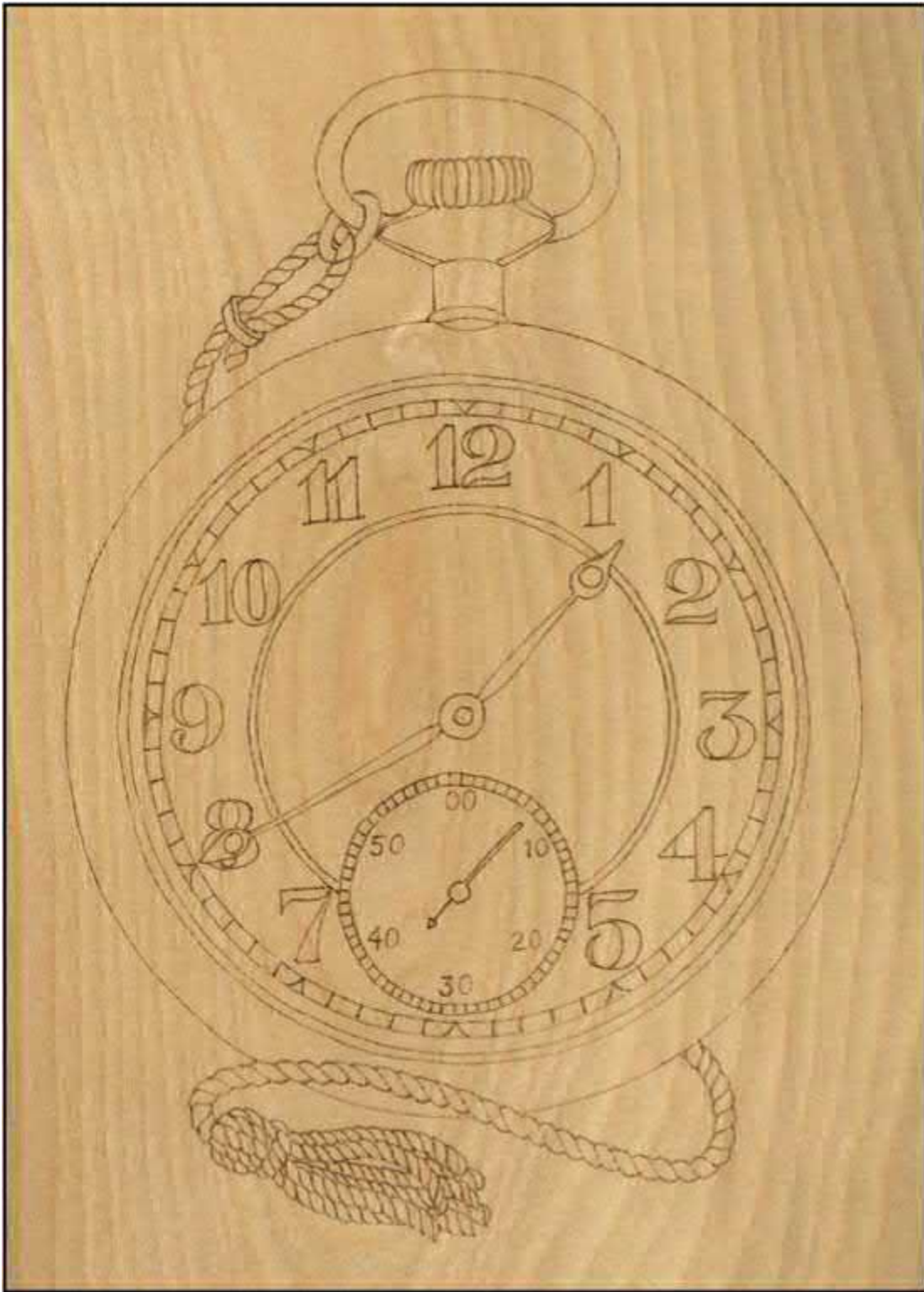
Textures: Scrubby line (Squares 61–64), curved line (Squares 69–70), tightly packed spots (Square 56), wide crosshatch pattern (Squares 15–23), tight crosshatch pattern (Squares 24–32), outline



Step 1: Tracing and Outlining

Begin the work by lightly sanding your plywood with fine-grit sandpaper. Remove any sanding dust with a lint-free cloth or large drafter's dusting brush. Make a tracing of the pattern onto vellum or onionskin tracing paper. Rub the back of the tracing paper with a soft pencil until you have created a dark, even layer of graphite. Tape the pattern paper to your board and retrace the pattern lines. Trace only those lines that you need to guide you through the work. With a white artist's eraser, rub off any smudges or streaks left during the tracing process. Set your thermostat to a medium-high temperature. With the writing tip, outline all of the pattern lines.

The Pocket Watch design uses several important texturing patterns, the scrubby-line stroke (Squares 61–64), tightly packed spots (Square 56), and the curved-line stroke (Squares 69–70), which can be found in the Creating a Practice Board section here. The crosshatching pattern, whether worked with wide spacing (Squares 15–23) or tight spacing (Squares 24–32), is used in this design for the medium and pale shaded areas of the pocket watch's body.



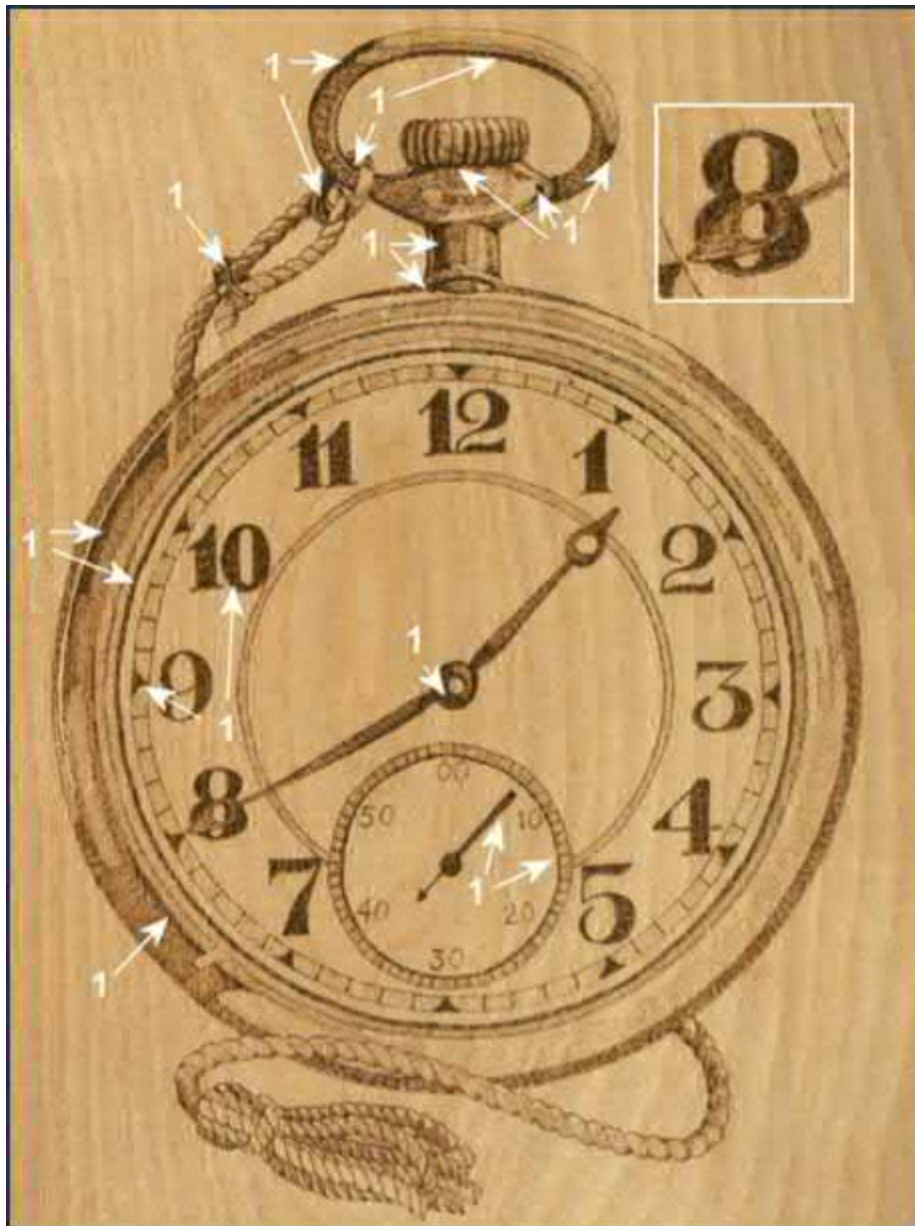
Tracing: The pattern for *The Pocket Watch* contains lines for the element outlines as well as guidelines for the five different tonal value areas. These tonal value guidelines are most apparent in the outer ring of the watch. In my sample, I have traced only the element outlines of the pattern. You can also trace the tonal value guidelines if you wish.



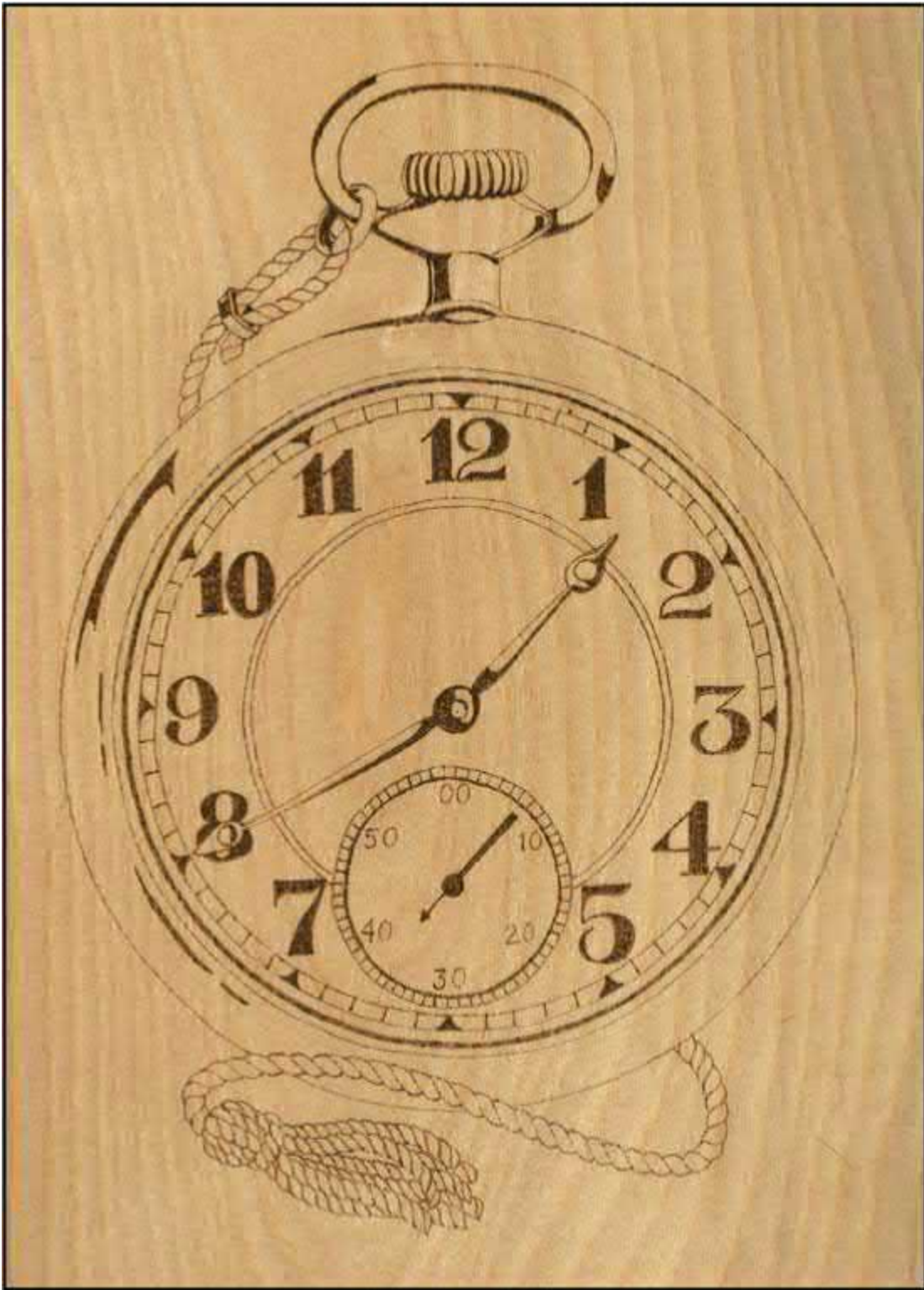
Outlining: Burning your outline on a medium setting keeps the outlining from becoming too dark early in the work. You can reburn sections of the outlines later to darken them as necessary.

Step 2: Very Dark Tones

The burning for this pattern has been broken down into four tonal values: very dark, dark, medium, and light. Set your thermostat to a medium-high temperature. Use a slow, scrubby-line stroke (Squares 61–64) to fill in the very dark tonal values on your clock. For some of the small areas, you can fill that section by touching the tip of the tool to the wood and then lifting the tip. This burns small tightly packed black spots (Square 56). When using the texture of small dark spots, the closer you pack the spots into the area, the darker that area will become.



Very dark tones (Value #1) map



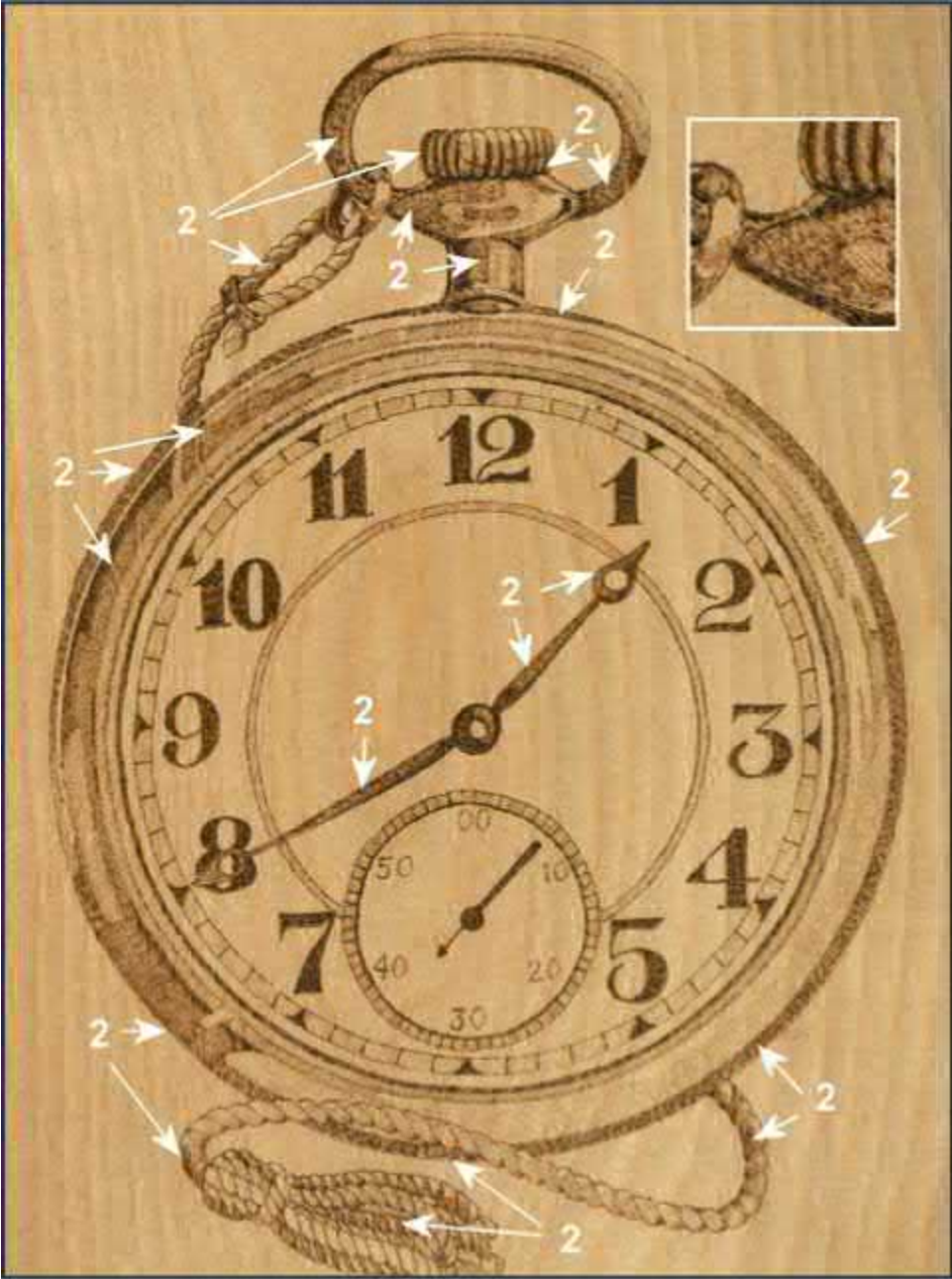
Very dark tones: The darkest areas of the watch pattern are the numbers, the triangles on the circular minute dial, the outer ring of the dial, and the inner circle on the seconds dial. There are several areas of very dark shadow in the winding set area, along the left side of the watch body, the watch hands, and in the upper section of the twisted cord. Mark the registration lines on the sides of the cylinder.



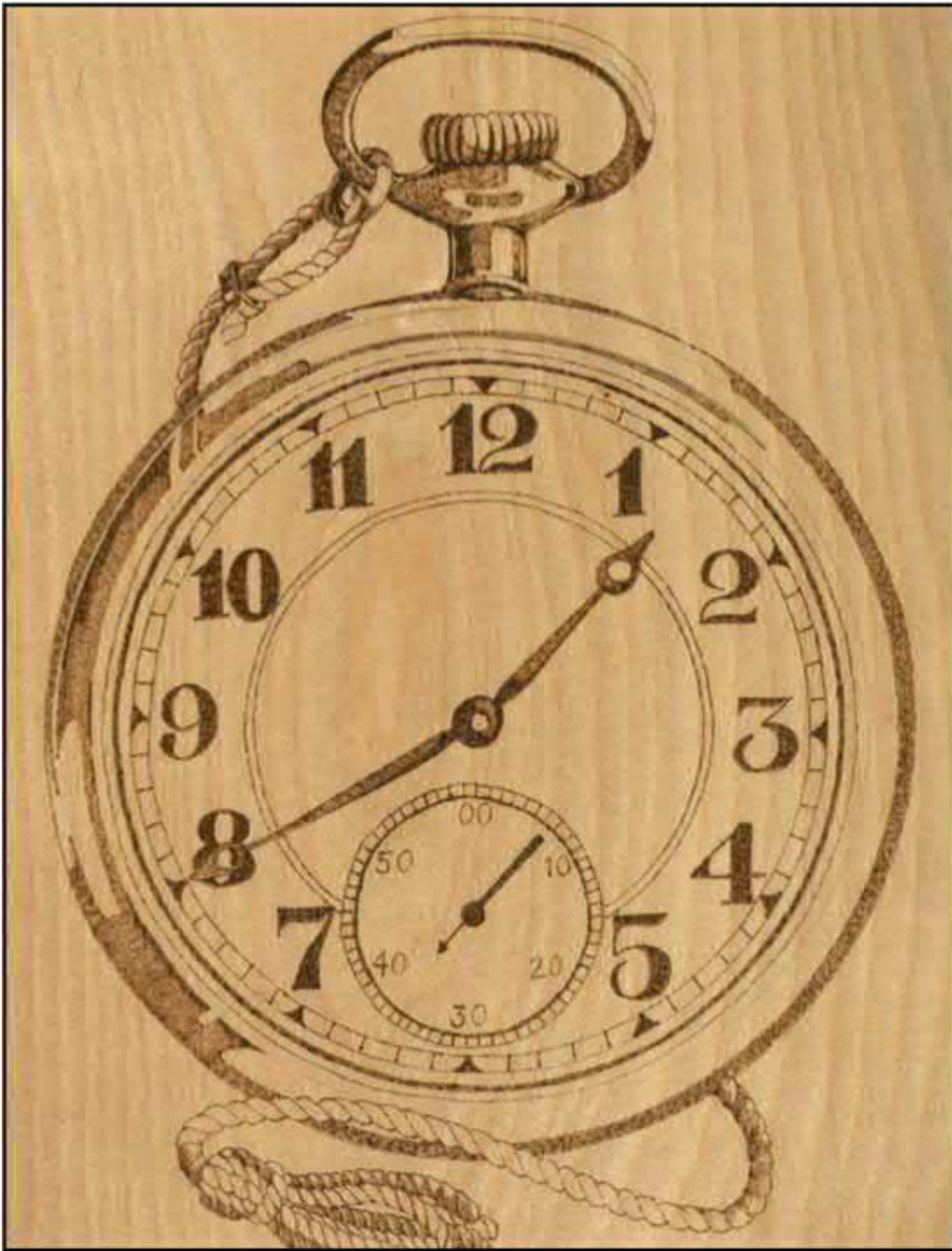
Very dark tones, close-up: The numbers are the most important elements of this design. By burning them to the darkest tonal value, you give them both strength and visual emphasis.

Step 3: Dark Tones

Reduce the temperature slightly and begin working the dark areas. I have used both the scrubby-line fill and a short curved-line fill (Squares 69–70) for my texturing. The burning lines in both of these textures are tightly packed to create the color tone.



Dark tones (Value #2) map



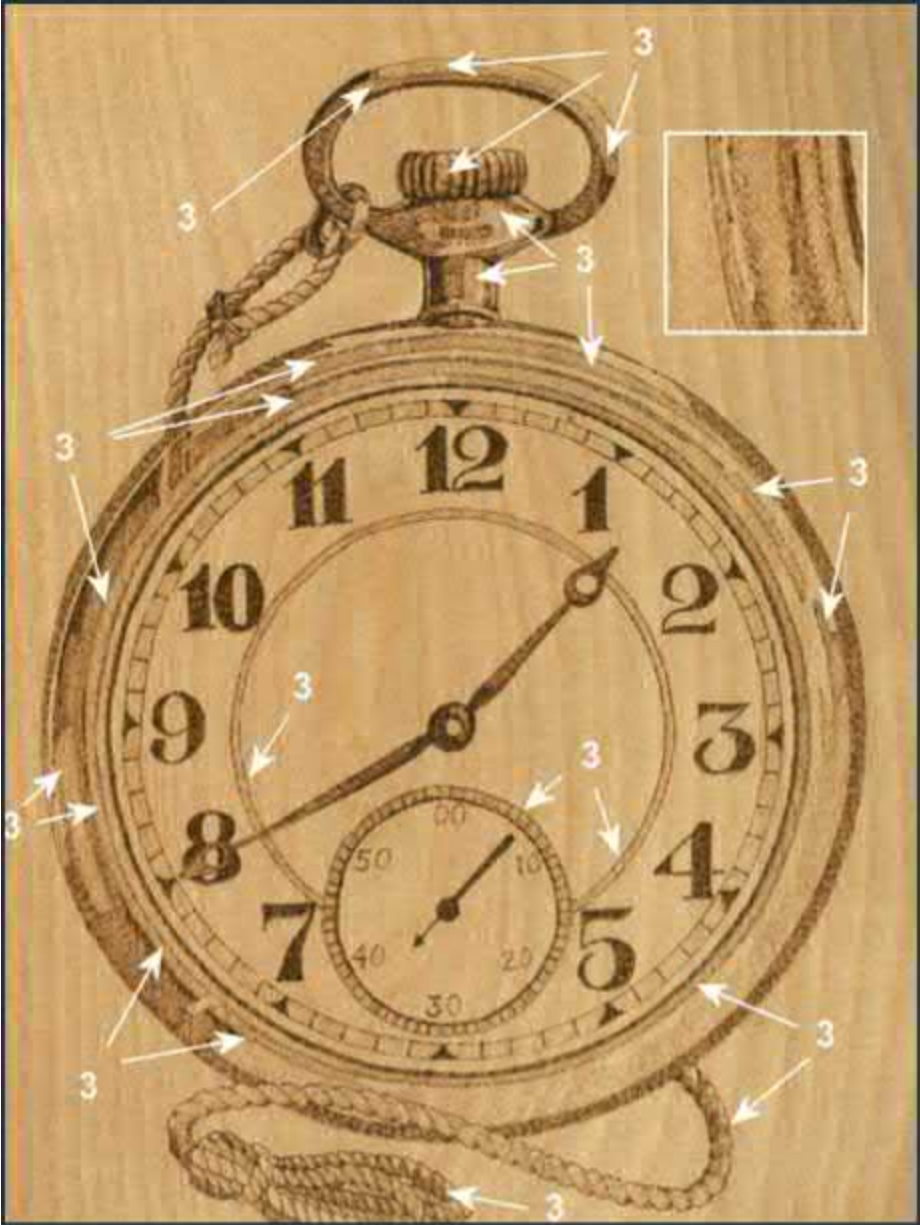
Dark tones: This burning of the dark tones includes the remaining portions of the clock hands, a large portion of the left side of the winding stem area and areas in the twisted cord, both above and below the clock, and the tassel. A ring of dark tone shadow goes around the clock body. One small section on the lower left side of the clock body remains unburned.



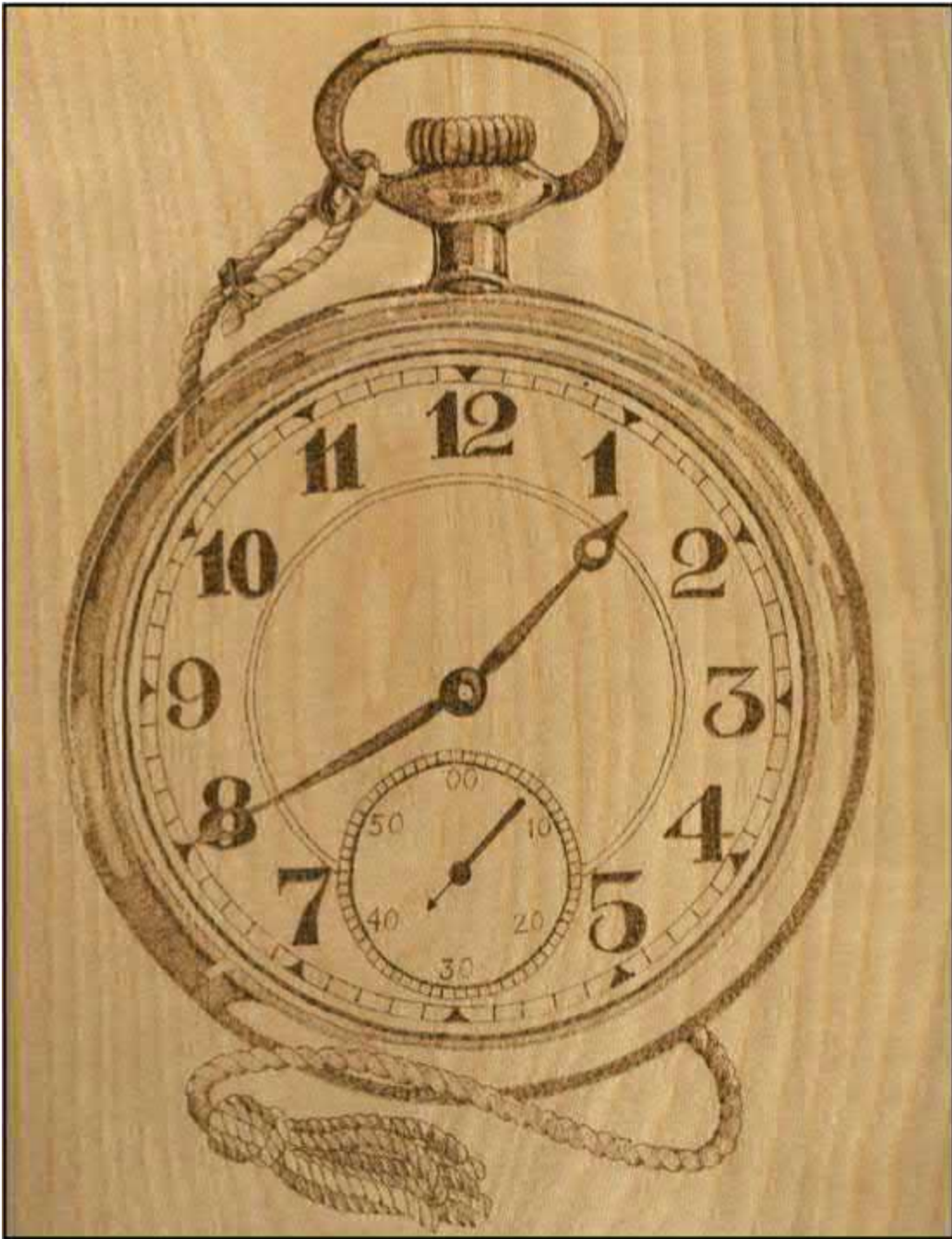
Dark tones, close-up: Notice that with a variable-temperature tool you can completely fill an area, allowing little or no unburned wood to show, using medium-toned coloring. If you are using a one-temperature tool, you may wish to use a wide crosshatch texture (Squares 15–23) in this area, letting some of the wood color show to achieve an overall dark but not black tone.

Step 4: Medium Tones

For the medium-toned values, I have left the temperature setting the same. Use a tight crosshatch pattern (Squares 24–32) that allows some of the original wood coloring to show through the burning to fill in the medium areas.



Medium tones (Value #3) map



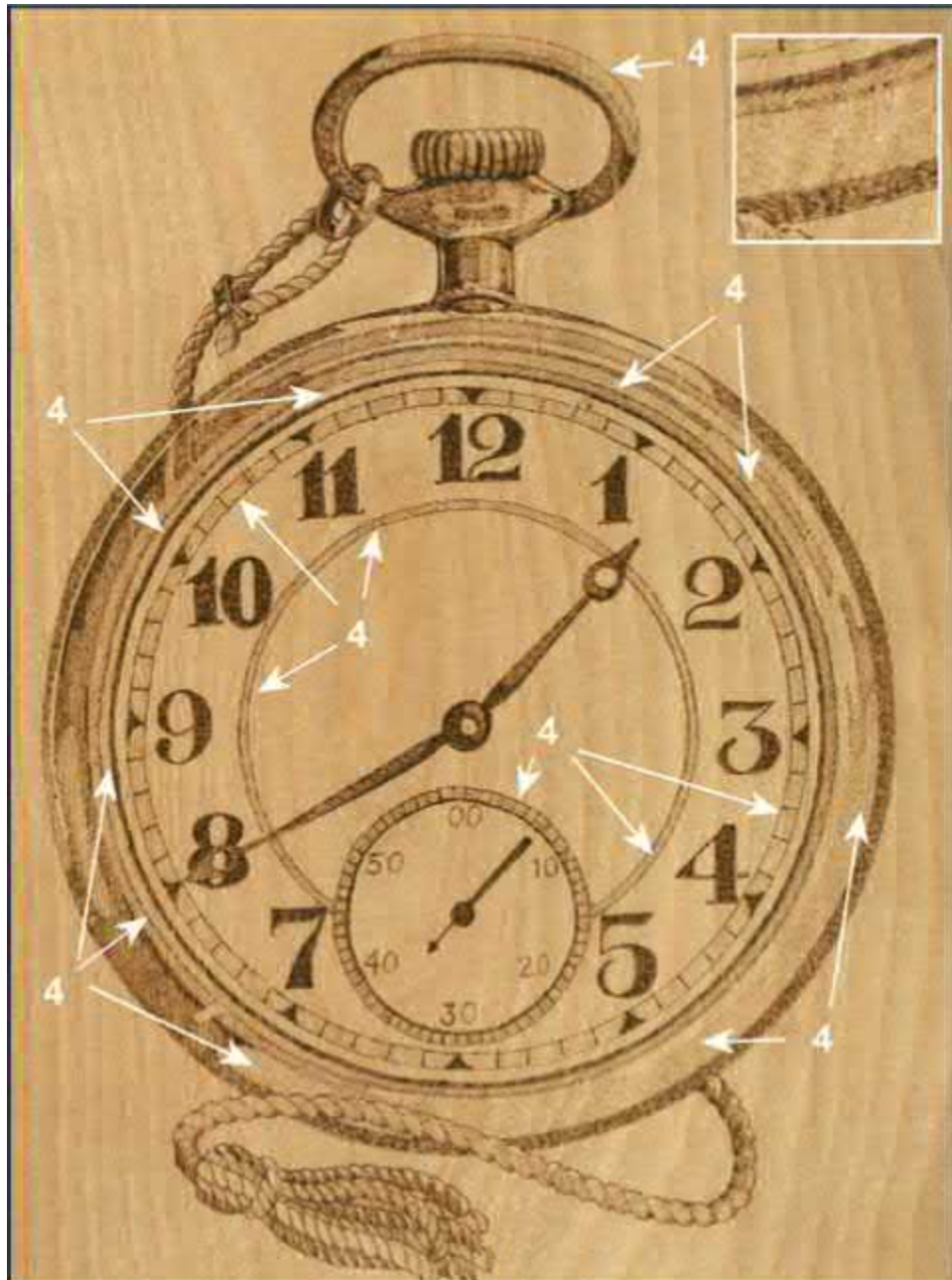
Medium tones: An inner circle of shading in the clock body, especially in the upper left side is worked using a medium tone. There are also medium-toned areas in the winding stem area, the twisted cord, and the tassel. Notice that there is a section in the clock body's left side adjacent to the clock dial that remains unburned.



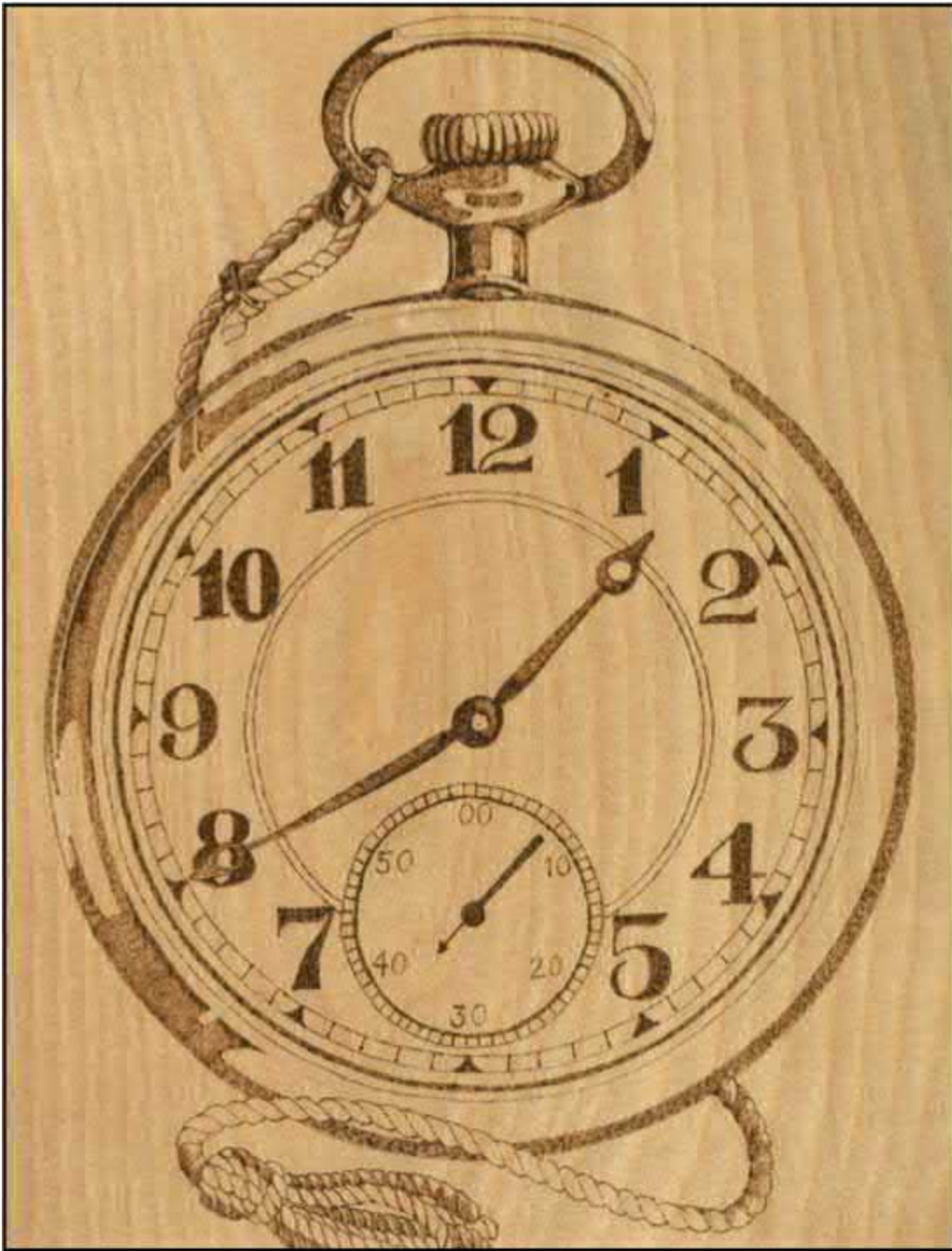
Medium tones, close-up: The temperature setting has not been changed between the dark tone step and the medium tone step. The color changes instead because of the texturing pattern. Crosshatch texturing allows some of the original wood to show through the burned lines, therefore giving a lighter or paler look than tightly packed lines burned at the same temperature. If you are using a one-temperature tool and you crosshatched the dark tones, allow more original wood between your crosshatch burned lines for this step.

Step 5: Light Tones

The temperature setting has been reduced to medium-low. Using a scrubby-line stroke, burn in the light areas. When you have completed the burning, you should have four very distinct color tones in the work with the face of the clock remaining the original color of the wood.



Light tones (Value #4) map



Light tones: A light value is used to fill in the minute ring of the clock dial and the seconds dial, the inner ring on the clock dial, and much of the right side of the clock body. The lower side of the open loop in the winding stem is completed in light value as are the forward sections of the twisted cord.

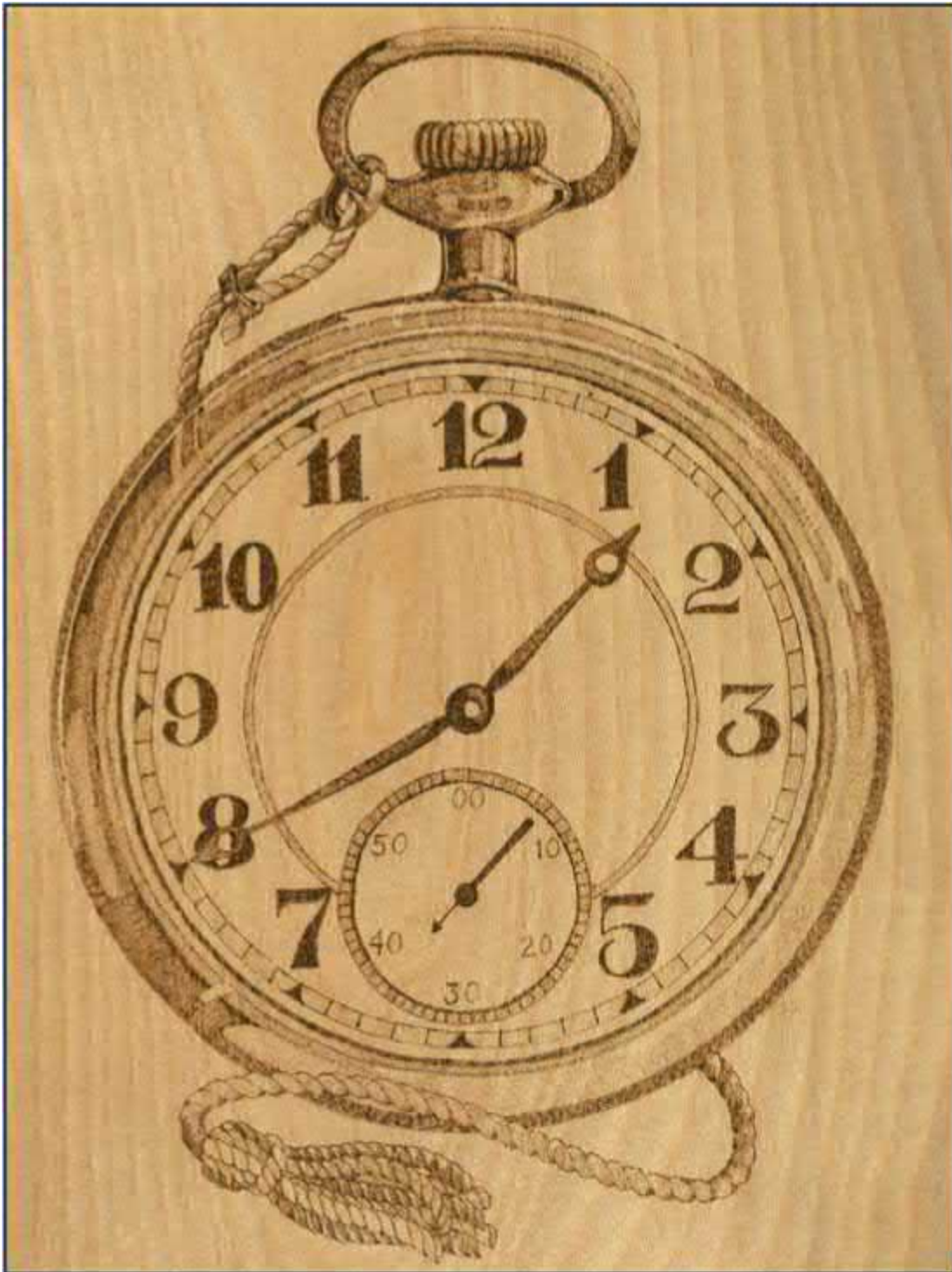


Light tones, close-up: When this step is complete, you should have four distinct tonal values ranging from very dark to light. The background to the clock dial remains unburned. If you are using a one-temperature tool, unplug your tool. Allow it to cool down, and then plug it in again. At that point, burn the light tones before your tool reaches its maximum heat setting.

Step 6: Finishing Steps

Once the burning is complete, lightly sand the surface of the project with fine-grit sandpaper or a foam-core emery board to remove the roughness. Next, use a white artist's eraser over the burning to remove any pencil lines from the original tracing. Set your work where you can look over the project. Check that you have both very dark chocolate areas in the work as well as very pale linen colors to create contrast in the work. Are there middle tones of medium brown and coffee-with-cream shades?

Even though you have worked through the steps of the project, new layering or shading can be added at this point to strengthen your design. This is an excellent time to sign and date your work in the lower right-hand corner. Once any touch-ups are finished, re-sand lightly, dust, and seal your project with either polyurethane or a paste wax (see the Finishing Steps for Woodburning section here for more information).



Creating a Real Wall Clock

Once you've mastered the tonal values, you may want to create this project as the background of an actual wall clock. Your woodburning becomes the clock face with battery clock hands to keep time.

Step 1: Purchase battery clockworks. Battery clocks come with different lengths of shafts that go through the wood and hold the clock hands. Be sure to match the length of this shaft to the thickness of your wood.

Step 2: Measure the length of the big hand of the battery clock. Then, reduce the size of the burning pattern so that the length of the big hand in the pattern is identical to the length of the battery clock's big hand. This will be an approximate pattern width of 5½" to 6" (14 to 15cm).

- Step 3:** Trace this small-sized pattern to the plywood, but leave out the hands of the pattern clock. Mark a ¼" (6.4mm) margin beyond the outline of the clock.
- Step 4:** With a scroll saw, cut out the clock along the ¼" (6.4mm)-margin line. Drill a hole in the center of the clock that matches the diameter of the battery clock's shaft.
- Step 5:** Burn the pattern. You might consider adding a manufacturer's name in the clock face area directly under the number 12. Use your surname as the manufacturer (examples: Johnson's Clockworks or Smith's Swiss Movements).
- Step 6:** Once the burning is complete, mount the battery clock through the hole you drilled.

Part 3



Projects & Patterns

Now that you have mastered the techniques and the theory behind woodburning, it's time to put your skills to work. In this next part, you'll find three step-by-step demonstrations. *Dragonette* is a rather simple burning pattern designed for beginners. In it, you'll use basic woodburning strokes to create several tonal values. *Mallard Drake* was created for intermediate woodburners. It features more difficult techniques, a greater number of tonal values, and a colored finish. *The Country Church* was designed for advanced woodburners. Employing many different texturing techniques and a wide variety of tonal values gives this landscape piece the illusion of depth.

After you complete each of the demonstrations, you can continue with the rest of the original woodburning patterns featured in each part. Each design includes a pattern and a photograph of the finished piece.



Beginning Projects

The *Dragonette* is a wonderful beginner's project that will allow you to experiment with your different tip styles and with the tonal values you can create with your woodburner. Because the *Dragonette* is a mythical creature, this pattern is very adaptable. So, if one area becomes a little lighter or a little darker or if your outlines do not exactly follow the tracing lines, this design will still finish beautifully.

Once you have completed the *Dragonette*, you can move on to the 10 additional beginning designs included in this section. These projects use simple texturing or basic tonal values—perfect for the new woodburner. They include a straight-line textured burning for *Our Daily Bread* and *Goldfish* and quick, negative space designs for *Pentagram Star* and *My Room Gingerbread Man*. The *Wild Rose Corner* shows the use of dramatic tonal contrasts. *Single Briar Rose* and *Summer Morning Sun Face* let you combine basic shading, outlining, and tonal value contrasts.



Creating the *Dragonette* Step-by-Step

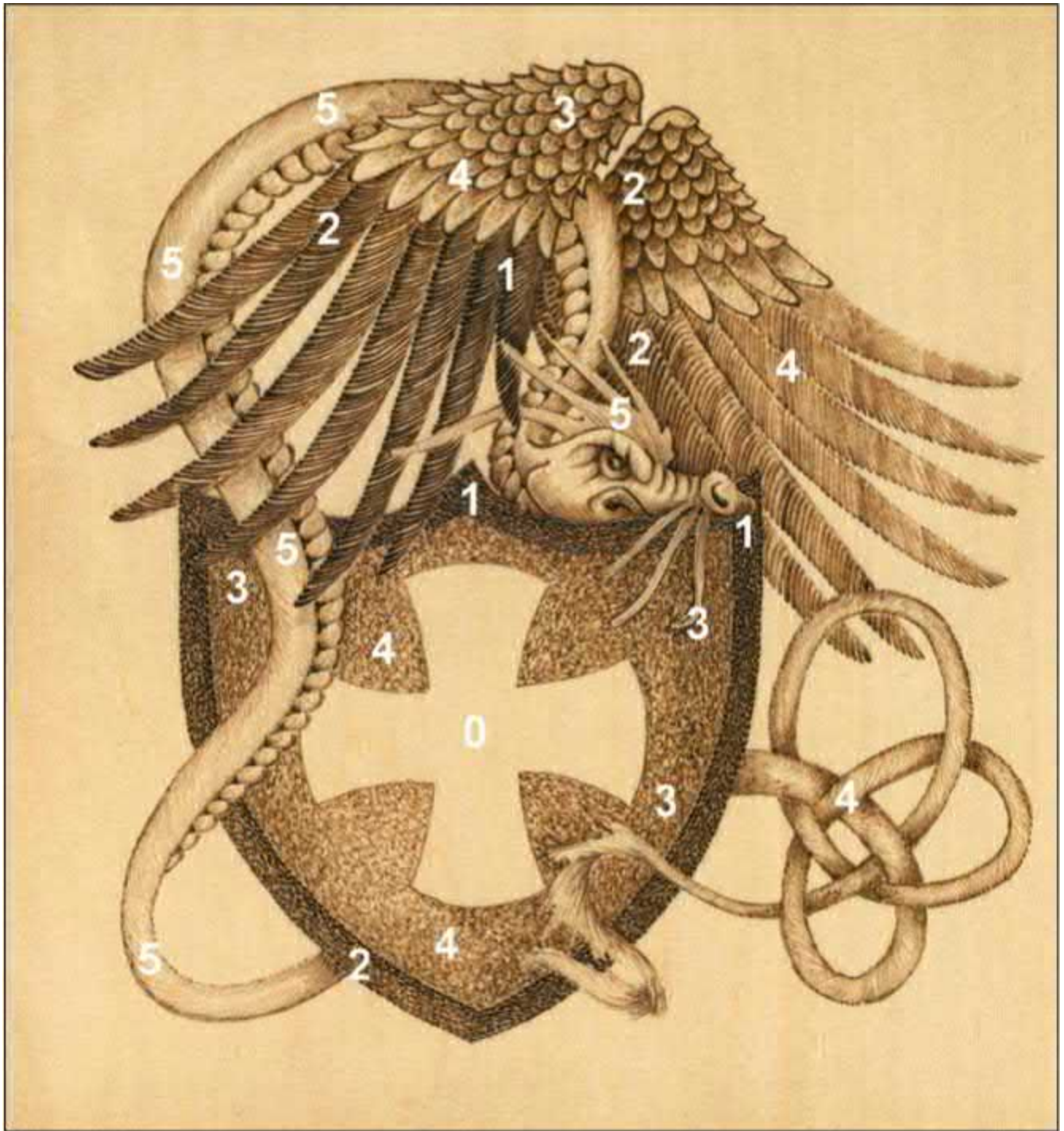
Dragonette has claimed a battle shield as his favorite resting spot. With wings flared, he is quite ready to protect his territory. In fact, he is so intense in his attitudes that he has twisted his tail into a Celtic knot. With bold, dark tonal areas contrasting against the original color of the wood in the shield's cross, this pattern makes an excellent beginner's project.

The original design was worked on a 9" × 9" (22.9 × 22.9cm) basswood pre-routed wall plaque. The design itself measures 7" × 7" (17.8 × 17.8cm). It was burned using a variable-temperature tool and a writing tip; however, this project is very suitable for a one-temperature tool.

Skills List

Tool:	Variable-temperature or one-temperature tool
Tip:	Writing tip or universal tip
Wood:	Pre-routed basswood wall plaque, 9" × 9" (22.9 × 22.9cm)
Textures:	Short curved line (Square 70) Long curved line (Square 69) Random curls (Squares 33–37) Scrubby line (Squares 61–64) Long scales (Square 57) Dash stroke (Squares 1–5)

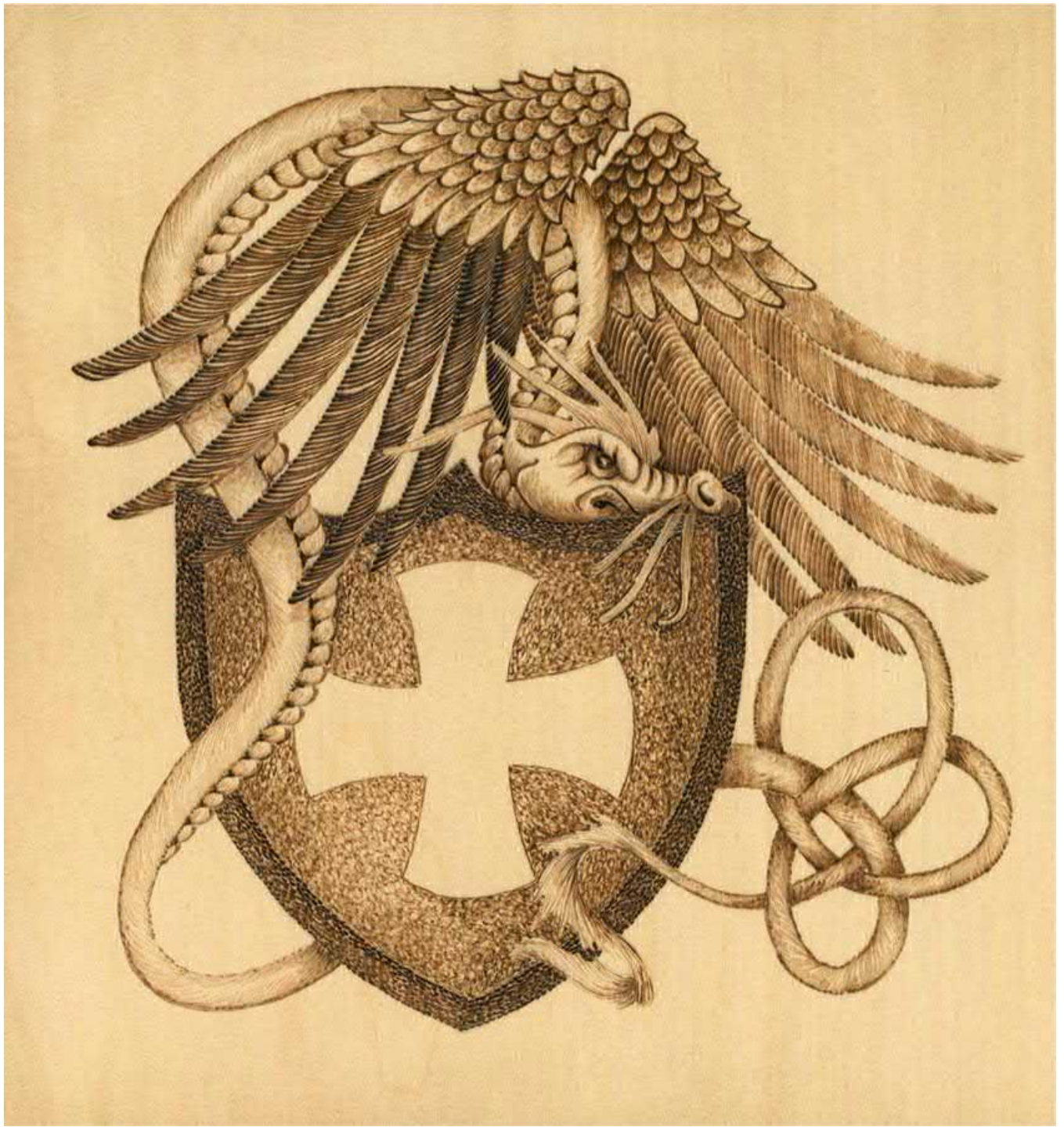
Tonal Values for Dragonette



Dragonette



© Lora S. Irish



Step 1–6: Transferring the pattern

- Step 1:** Begin the work by lightly sanding the wood with fine-grit sandpaper.
- Step 2:** Remove any sanding dust with a lint-free cloth or a drafter's dusting brush.
- Step 3:** Make a copy of the pattern from this book on vellum or onionskin tracing paper.
- Step 4:** Rub the back of the tracing paper with a soft #4B to #6B pencil until you have created a dark, even layer of graphite.
- Step 5:** Tape the paper to your board, graphite side down, and retrace the pattern lines. Trace only those lines that you need to guide you through the work.
- Step 6:** With a white artist's eraser, rub off any smudges or streaks left during the tracing process.



Trace the pattern onto the wood using vellum or onionskin tracing paper and graphite pencils.



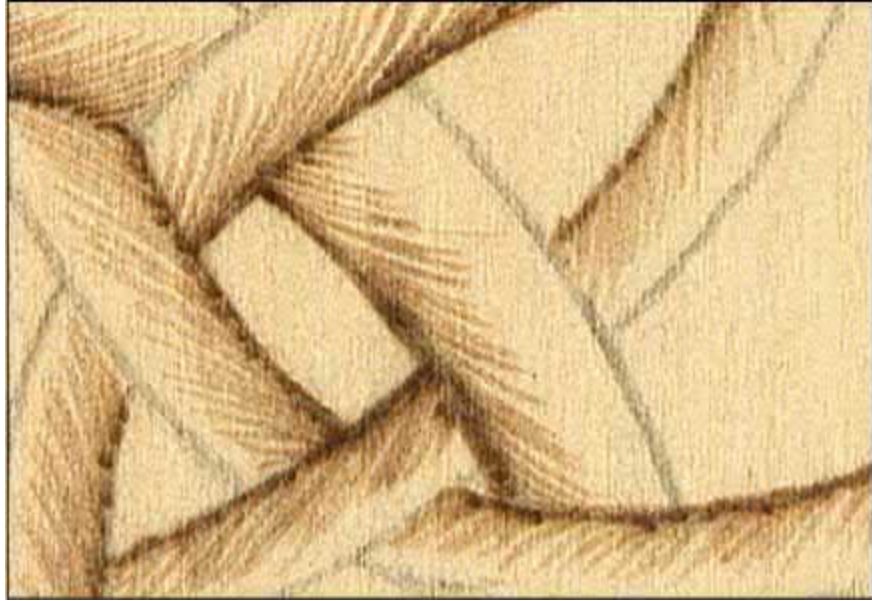
Clean up smudges with a white artist's eraser.

Step 7–10: Shading one side of the body

- Step 7:** Begin the project by shading the top portion of the dragonette's body where it disappears under the front wing. Use a medium temperature setting and a short curved-line stroke (Square 70).
- Step 8:** As the body flows down the plaque, the shaded side will become the bottom portion of the body where the tail twists under the shield. Limit the shading to the bottom side of the tail when it reappears on the right side of the shield.
- Step 9:** Follow this side as the tail travels through the knot, whether that side is on the top or bottom of the dragonette's body. Stop the shading where the tail feathers begin.
- Step 10:** When the short curved-line shading is complete, add an outline along that side of the dragon's body and tail.



Here, one side of the dragon's body is shaded with short curved lines.

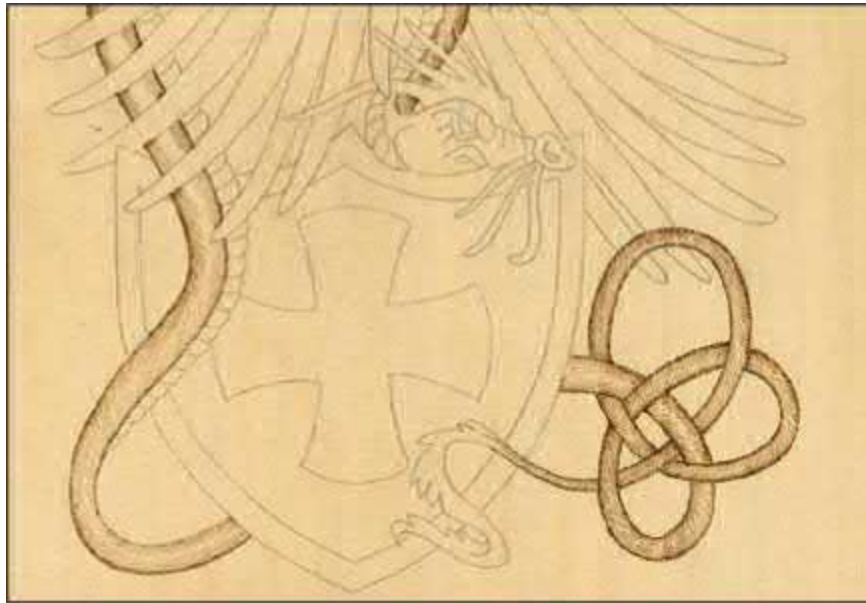


Be sure to shade the correct side of the tail as it twists and turns.

Step 11–12: Shading the remaining body

Step 11: Repeat the shading steps for the remaining side of the dragonette's body. Notice how the short curved-line stroke for this side follows the direction established when you worked the first side. The curved lines from the two sides work toward each other, creating a broken S-shaped line.

Step 12: When the shading is complete, add an outline to the second side of the body.



Now, shade the other side of the dragon's body.



It is much easier to shade this half of the dragon's body now that the other side is done.

Step 13–15: Belly-fold shading

- Step 13:** As with the body, the belly folds will be worked in two phases, one side at a time.
- Step 14:** Begin your work where the neck joins the head. Shade on the lower outside edge of the belly fold. This shading is created with short, curved lines that radiate from the lower, outer point.
- Step 15:** As you work through the belly folds, limit the shading to the lower portion for each new fold.



The belly-fold shading has been completed.



Use short curved lines that radiate from the lower outer point of the belly fold.

Step 16–18: Belly shading for the remaining side

- Step 16:** The second stage of the belly shading is worked where the belly fold meets the body. Use a medium-high heat setting.
- Step 17:** In this angled area, burn a small, very dark, triangle shape. This separates the top section of one belly fold from the bottom section of the next belly fold. Because this triangle is worked to a darker tone, it pushes the belly fold deeply into its junction with the body.
- Step 18:** Add a dark, comma-shaped line along the outside edge of each belly fold. Do not completely outline these folds; you are just accenting them.



Burn a dark triangle wherever the belly fold meets the body.



Burn the dark triangles using a medium-high setting to emphasize the separation of the belly folds.

Step 19–20: Adding wing shadows to the body

- Step 19:** On a medium temperature setting and using a random curl stroke (Squares 33–37), add a light layering of shadow to the body beneath each wing feather. This light shadowing implies that the wing lies over the body and therefore casts a shadow on that part of the body.
- Step 20:** Shadowed areas appear on the body on both sides of the wing's shoulder and beneath the five long wing feathers using the random curl stroke.



The random curl stroke creates the wings' shadows to the body.



The texture here is delicate but important for realism.

Step 21–33: Detailing the face

- Step 21:** The shading in the face is done with short curved lines. Set the tool to a medium temperature. Then, shade the nose ridges working from the left top.
- Step 22:** Shade the upper eye ridges and the nostril area starting at the bottom left.
- Step 23:** Burn the folds to the left of the eye with the short lines close to the eye.
- Step 24:** Start curved lines at the mouth area where the chin and jaw rest on the shield and pull them upward, arching to the left.
- Step 25:** Fill the nose tendrils with light-toned, long curved lines that follow the direction of that tendril.
- Step 26:** Work the crest with long curved lines that start at the skull and flow to the points of the crest.
- Step 27:** When the shading is complete, turn the temperature up slightly. Add a separating line between each nose ridge.
- Step 28:** Outline the bottom edge of the upper eye ridges.
- Step 29:** Use a large comma stroke to create the nostril.
- Step 30:** Detail along the lip line of the mouth and along the jaw line.
- Step 31:** Increase the temperature; then, add the mouth with a short scrubby-line stroke.
- Step 32:** Texture the eye with the same stroke, leaving a small white area for the eye's highlight.
- Step 33:** The folds to the left of the eye are darkly detailed, and a small spot of darkness is added to the inside corner of the eye.



Shade the face and facial hair with short curved lines.



The mouth, pupil, nostrils, and deep creases along the eye should be the darkest values on the face.

Step 34–35: Long wing feathers

- Step 34:** For the feathering of the wings, turn your tool to a hot temperature. Working the long front wing feather, use a curved-line stroke that starts on the outside edge of the feather and flows upward toward the inside edge. A dark starting point will appear naturally along this outer edge.
- Step 35:** The long back wing feathers are worked in the same manner, but turn the tool temperature down to a medium setting.



The front wing feathers are much darker than the back wing feathers.



Start the stroke from the edge of the feather and curve inward.

Step 36: Adding a second layer to the back wing

Step 36: After the long back wing feathers are completed, add a second layer in the area of the wing directly behind the dragonette's face and neck. Lay the tool tip back into the already burned curved line and re-burn that line. This will lightly darken this area of the wing to create more contrast between the wing and the face.



Re-burning the feathers surrounding the dragon's neck and face will emphasize the border there.



Burning a second layer will subtly darken the area.

Step 37: Outlining the shoulder feathers

Step 37: Setting the tool tip to a high temperature, outline each of the shoulder feathers.



Outline the shoulder feathers.



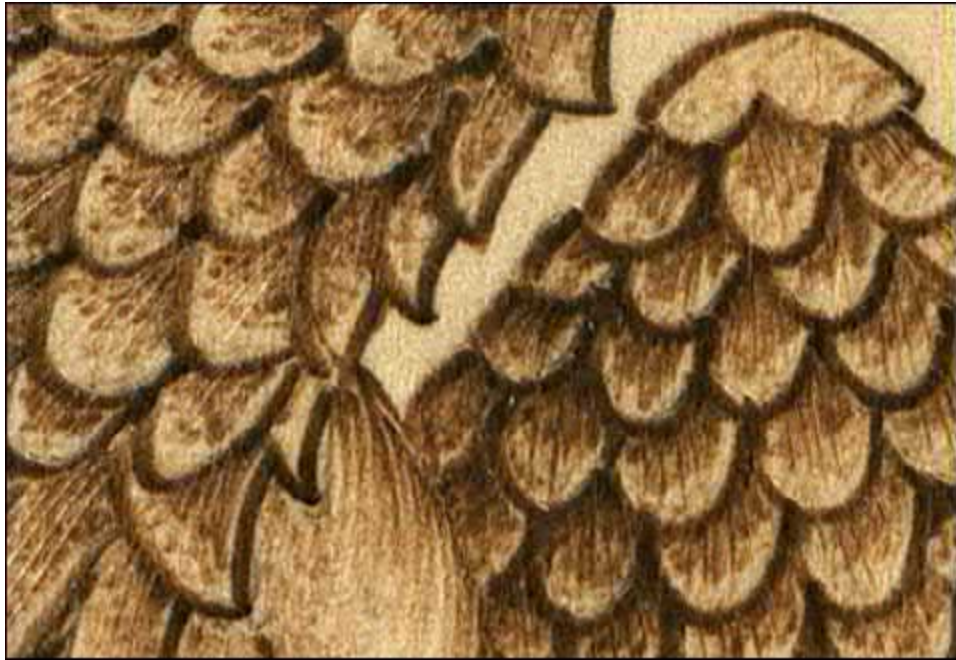
Use a high temperature to burn the outline; the dark line will be needed later.

Step 38–41: Burning the shoulder feathers and tail tip

- Step 38:** Keep the tool on a high setting and use a short scrubby-line stroke (Squares 61–64) to shade the top section of each shoulder feather. Because the scrubby-line stroke is applied at a slightly faster pace, this shadowing will become slightly paler than the slowly burned outline of the previous step.
- Step 39:** Outline each individual feather in the shoulder area using high heat and a long fish-scale texture (Square 57).
- Step 40:** Turn the tool temperature down slightly to a medium-high setting. Working from the right side of the tail tip, pull long curved lines through the tail tip toward the left side.
- Step 41:** Outline both sides of the tail tip.



Use the short scrubby-line stroke to shade each individual shoulder feather.



The dark outline from the previous section guides the placement of the scrubby-line shading.

Step 42–43: Shading the body of the shield

- Step 42:** The mid-ground area of the shield will be worked in two stages. On a medium-high setting, first outline the center cross design in the shield.
- Step 43:** A random curl stroke (Squares 33–37) is used next to fill in the area of the shield between the central cross design and the outer border of the shield. This random curl stroke will have lots of variations in color tones, giving this area of the shield extra interest.



Outline the cross and use the random curl stroke to fill the inner shield.



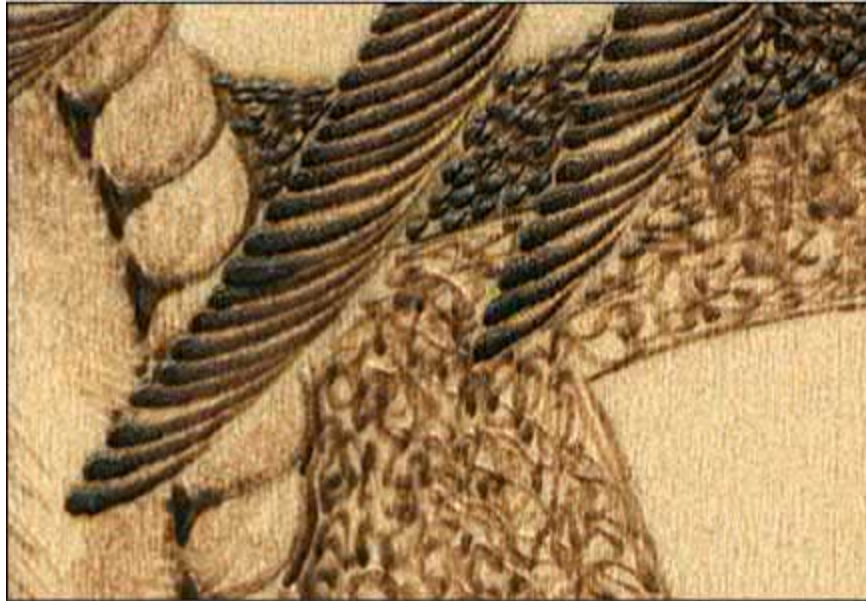
The random curl stroke adds lots of variation in color tones.

Step 44–46: Adding extra layering to the shield

- Step 44:** Notice in the photo that the area along the top section and the right side of the shield is darker than the rest of this area. These darker sections require a second layering of the random curl stroke.
- Step 45:** In both the left and right corners of this mid-ground, add a third layer of work. These added layers give the shield its bowed effect.
- Step 46:** Turn the tool setting to high and, using a dash stroke (Squares 1–5), fill in the outer border with a very dark color tone. Work this outer border with very tightly packed strokes until it has a solid black or dark chocolate coloring.



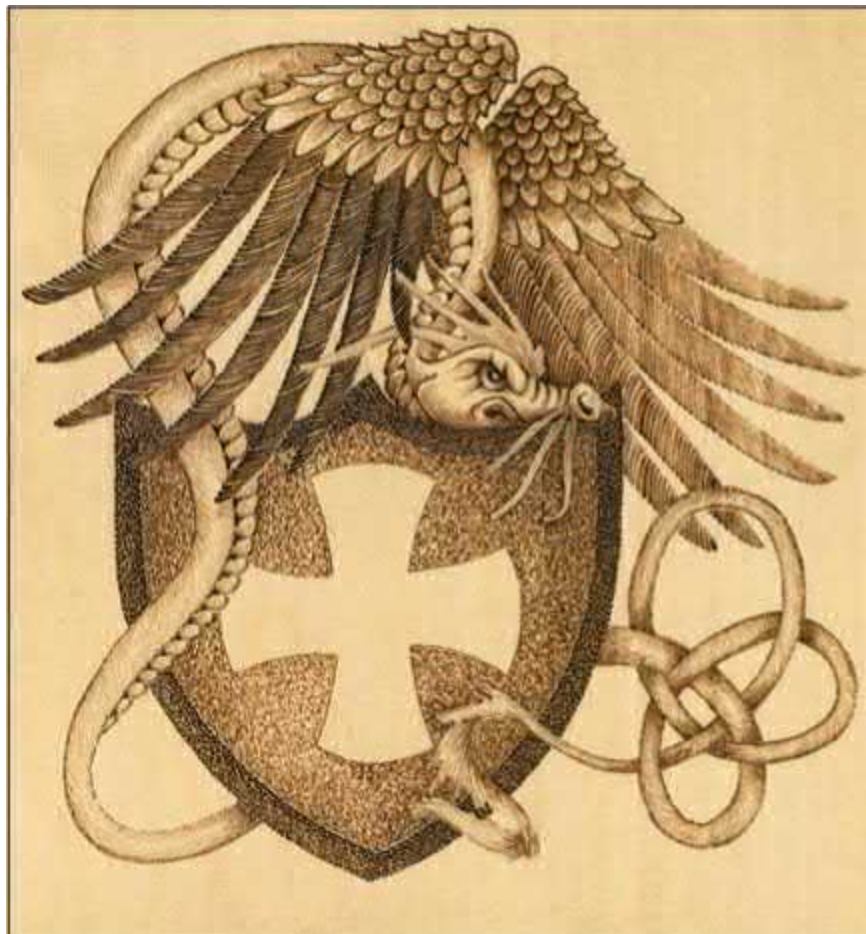
The outer border of the shield has been filled with a dash stroke and another layer of texture has been burned onto the outer parts of the inner shield.



The dark value of the dash stroke adds contrast between the beige of the cross and the shifting value of the shield.

Step 47–52: Finishing

- Step 47:** When the burning is complete, lightly sand the surface of the project with fine-grit sandpaper or a foam-core emery board to remove the roughness.
- Step 48:** Next, rub a white artist's eraser over the burning to remove any pencil lines from the original tracing.
- Step 49:** Remove any dust or eraser particles with a lint-free cloth or a drafter's dusting brush.
- Step 50:** Set your work where you can look over the project. Check that you have very dark chocolate areas as well as very pale linen colors to create contrast in the work. Are there middle tones of medium brown and coffee-with-cream shades? Even though you have worked through the steps of this project, new layering or shading can be added at this point to strengthen your design.
- Step 51:** This is an excellent time to sign and date your work in the lower right-hand corner.
- Step 52:** Once any touch-ups are finished, re-sand lightly, dust with a lint-free cloth, and seal your project with either polyurethane or a paste wax.



The finished *Dragonette*.

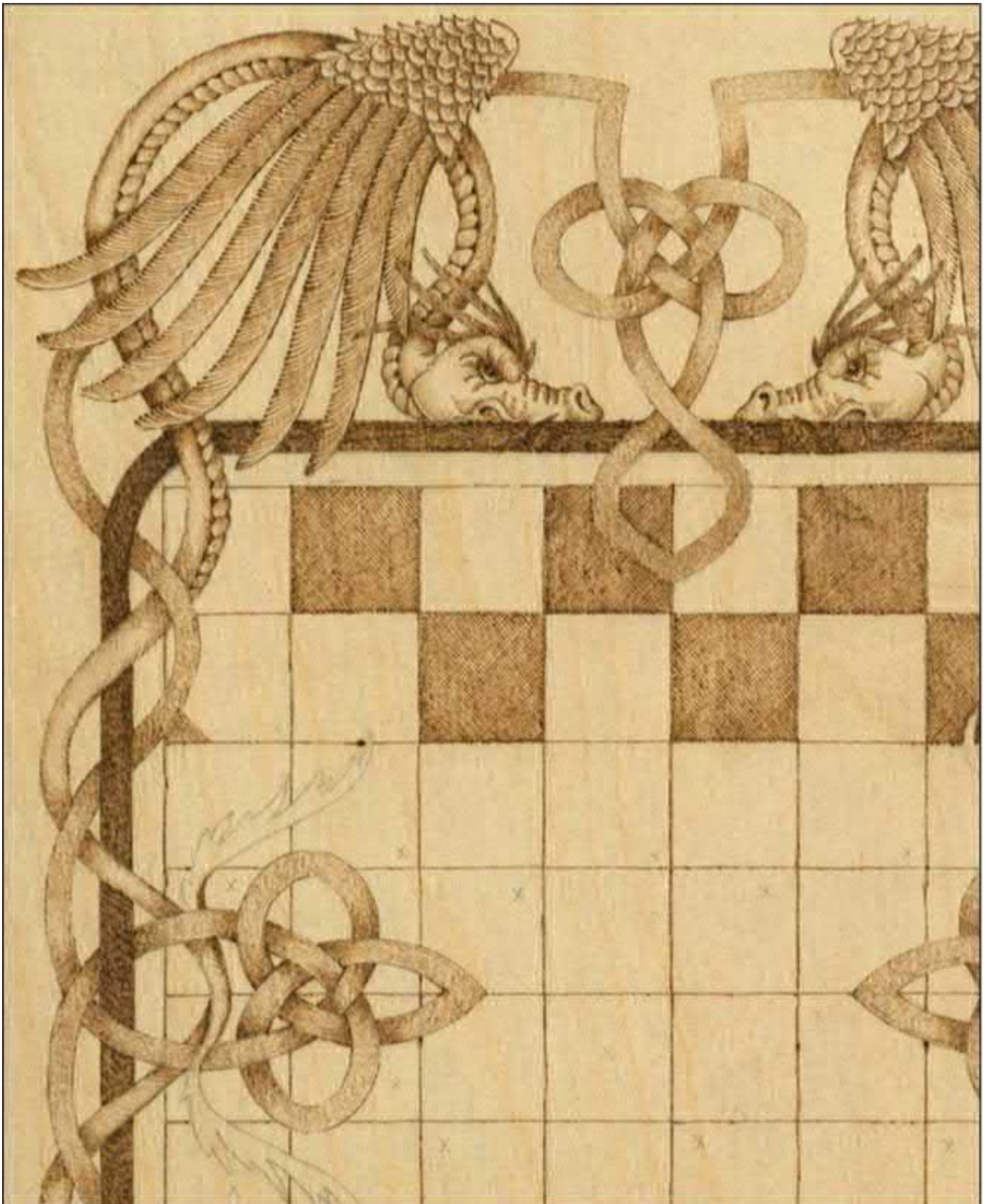
Dragonette Chessboard

Here is the same *Dragonette* design that you just worked but patterned for a game board or chessboard. The Celtic knot tail design has been increased to include a Celtic knot between the opposing dragonettes. Because this piece was worked on birch plywood, a harder wood than basswood, the tonal values are lighter than the deep color tones created on the *Dragonette* plaque. The width of each burned line tends to be slightly thinner on a harder wood than the width of a line done on a softer wood.

This *Dragonette Chessboard* was worked using the same step-by-step process as the *Dragonette* (with the shield). When the dragons were completed, the dark borderline surrounding the chessboard was burned in the same fashion as the dark borderline of the *Dragonette* (with the shield). The dark squares on the chessboard were burned on a medium setting using tight-spaced crosshatch (Squares 24–32).



This adaptation of the *Dragonette* pattern has a straight line under the dragon's head.



The *Dragonette Chessboard* features tight-spaced crosshatch on the dark squares.

Dragonette Chessboard with Coloring

When the burning for this chessboard was completed and the work sanded, I used watercolors to add bright colors (see larger photo and pattern here). The watercolors were first placed on a glass tile or plate

and then were thinned with water until they were fairly transparent. The paints were then applied using soft sable brushes by floating a light coat on each area. One color can be laid over another color to create shading or to deepen the original color. Be sure to allow the first layering of color to dry well before adding more. Any mistakes can easily be lifted with a wet brush.



Make the chessboard come alive with watercolors.

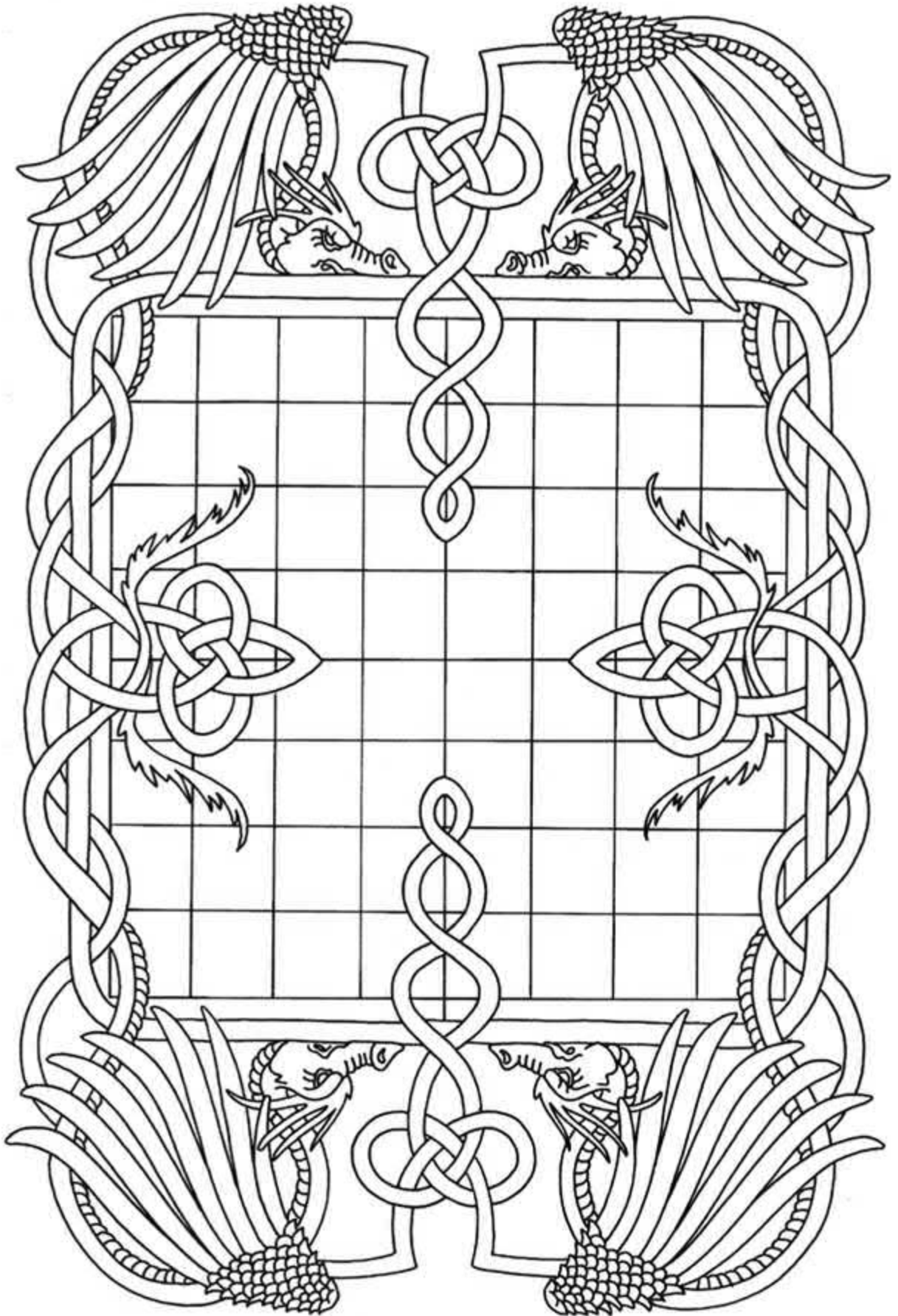
- Step 1:** Begin by applying one coat of the highlight color throughout the entire designated area. Do all of the highlight colors at one time. Allow the work to dry well, about one half hour.
- Step 2:** Where one element of a design goes underneath a second element, the first element will have a shadow area. Add the shading color to these areas of the design. Allow the highlight colors to remain unworked in the areas of the element that are farther removed from an overlapping element.
- Step 3:** In any small, tight areas where one element tucks under another, add one more layer of the dark shading color. For instance, for any one loop in the dragonette's body where both ends of that loop tuck under another element, you will have a small section of dark shading color, a wider section of shading color, a large area of highlight color, then back to the shading and dark shading colors.
- Step 4:** Once all of the coloring has been applied, allow the board to dry overnight. Then, give the chessboard several light coats of spray polyurethane. Two holes can be drilled along the top edge of the plywood board to string a leather handle for hanging. Now your chessboard can decorate your wall when it is not being used for your latest game of chess.

Dragonette Chessboard Color Chart

Most areas of this design will use two different colors to create the final effect. The first color, the highlight color, is applied to establish the general color of the entire element's area. For example, the entire face and body of the dragonette is first painted with yellow ochre. Once this highlight color has dried, a second color, called the shading color, is applied to any area of the element that tucks under or touches an adjacent area. For example, the neck of the dragonette is shaded with verde green where the neck touches the base of the head. The neck is also shaded with verde green where it tucks under the wings.

Area	Highlight Color	Shading Color
Body and face	Yellow ochre	Verde green
Tail tip	Deep yellow	Yellow ochre
Long wing feathers	Verde green	Light turquoise
Wing shoulders	Verde green	Light turquoise
Celtic knot line	Yellow ochre	Burnt sienna
Shadowing for all areas		Raw umber
Dark squares		Raw umber
Light squares		50% yellow ochre and 50% burnt sienna mixed half and half

Dragonette Chessboard



Dragonette Chessboard



Our Daily Bread

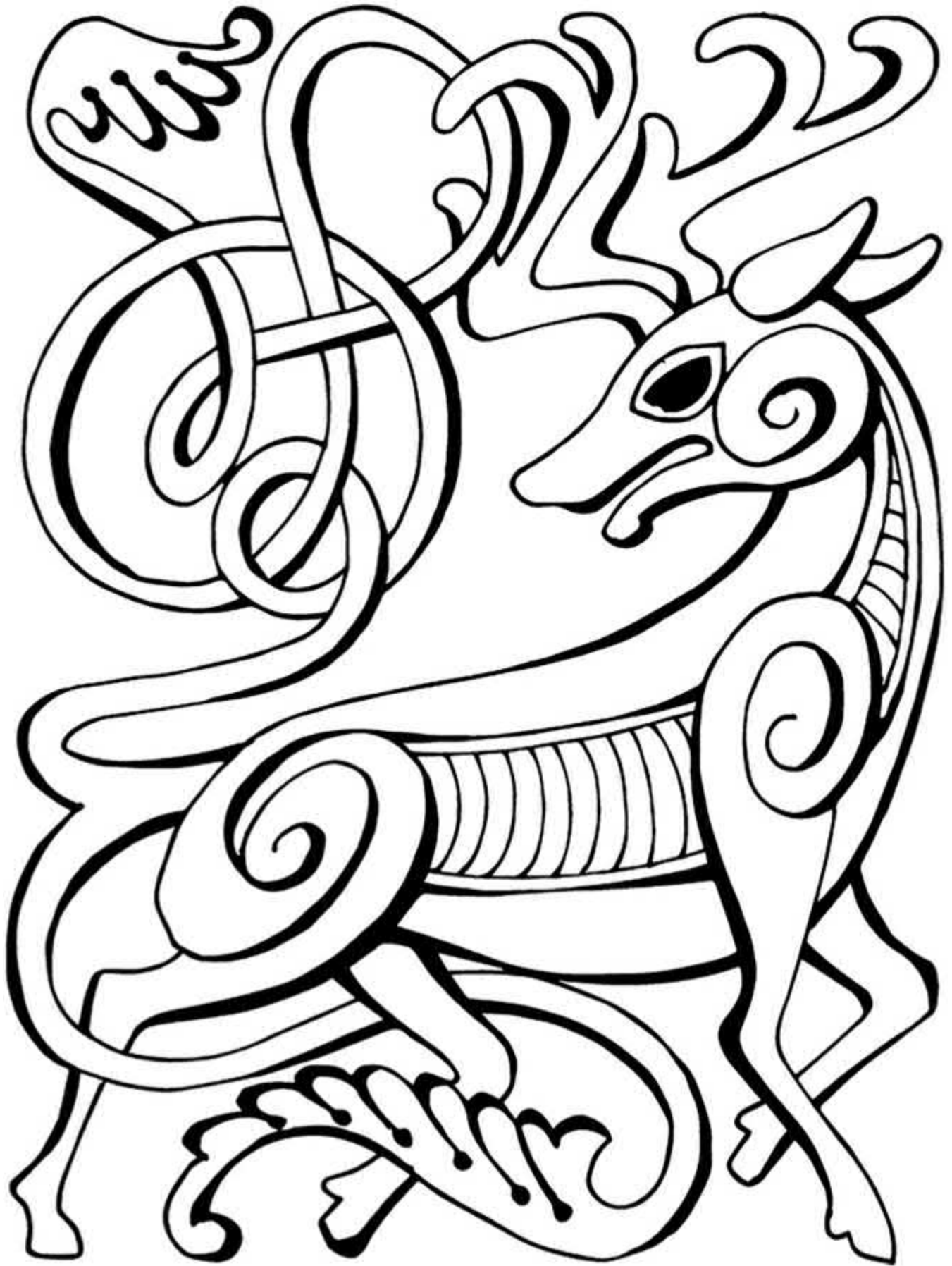


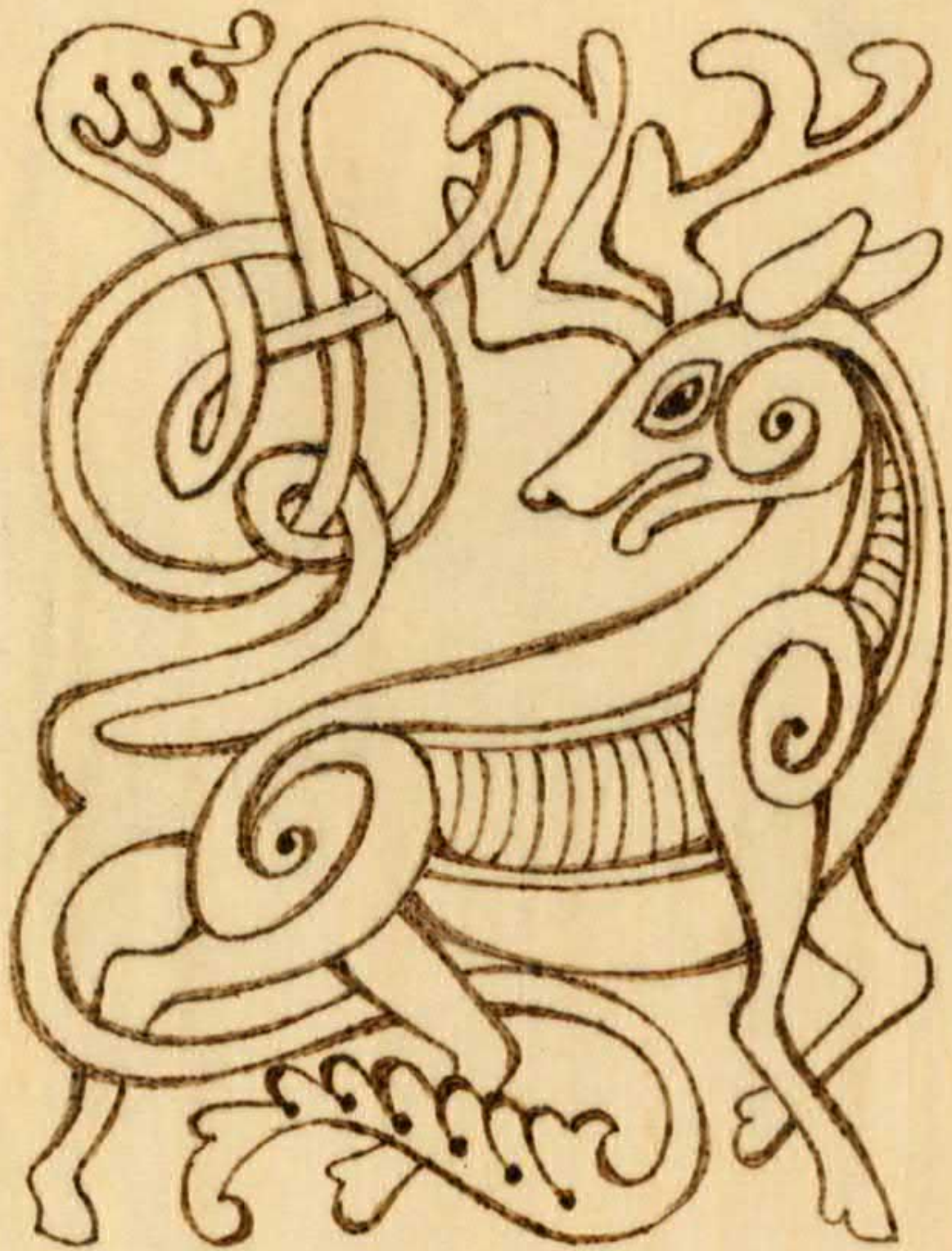


Give Us This Day

Our Daily Bread

Celtic Stag



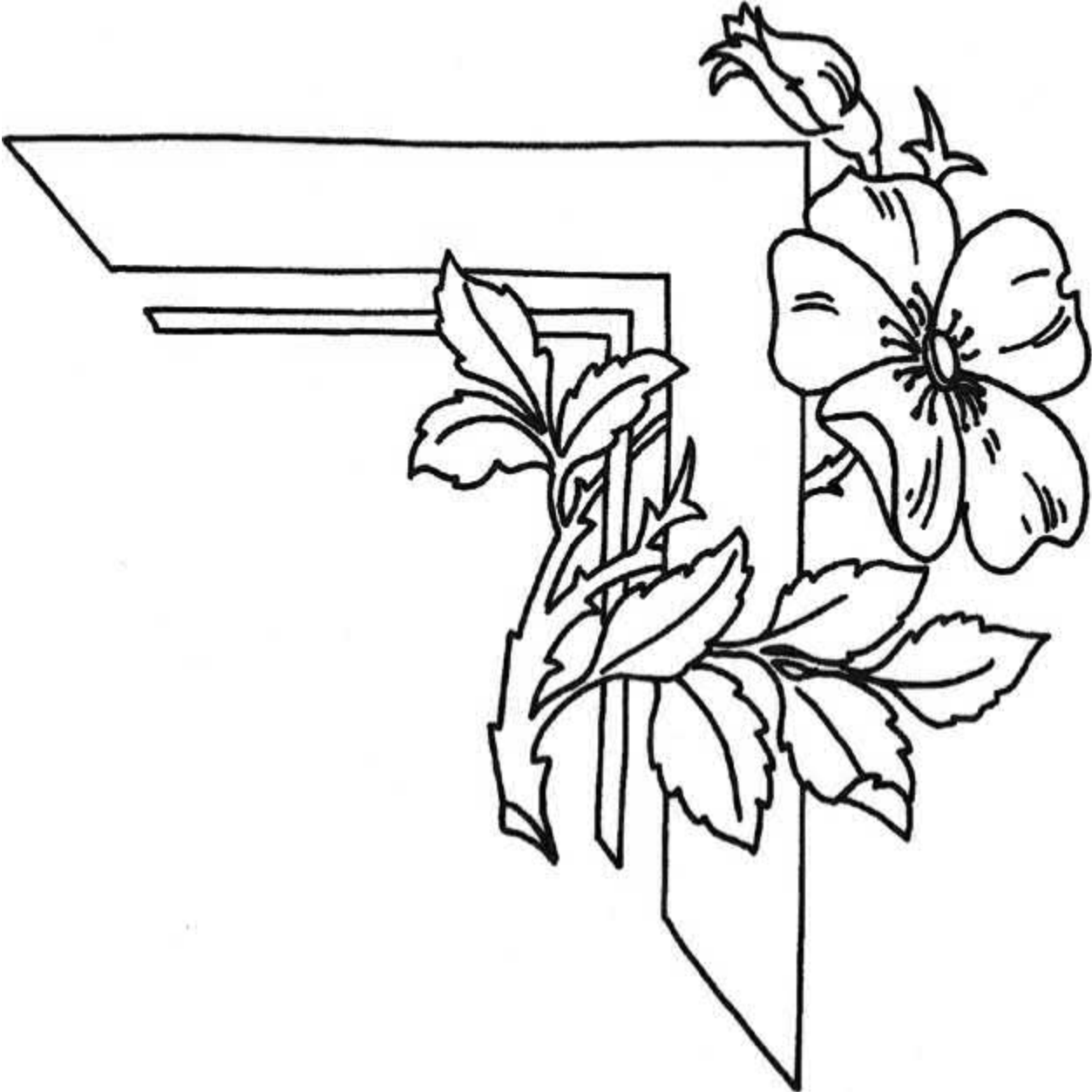


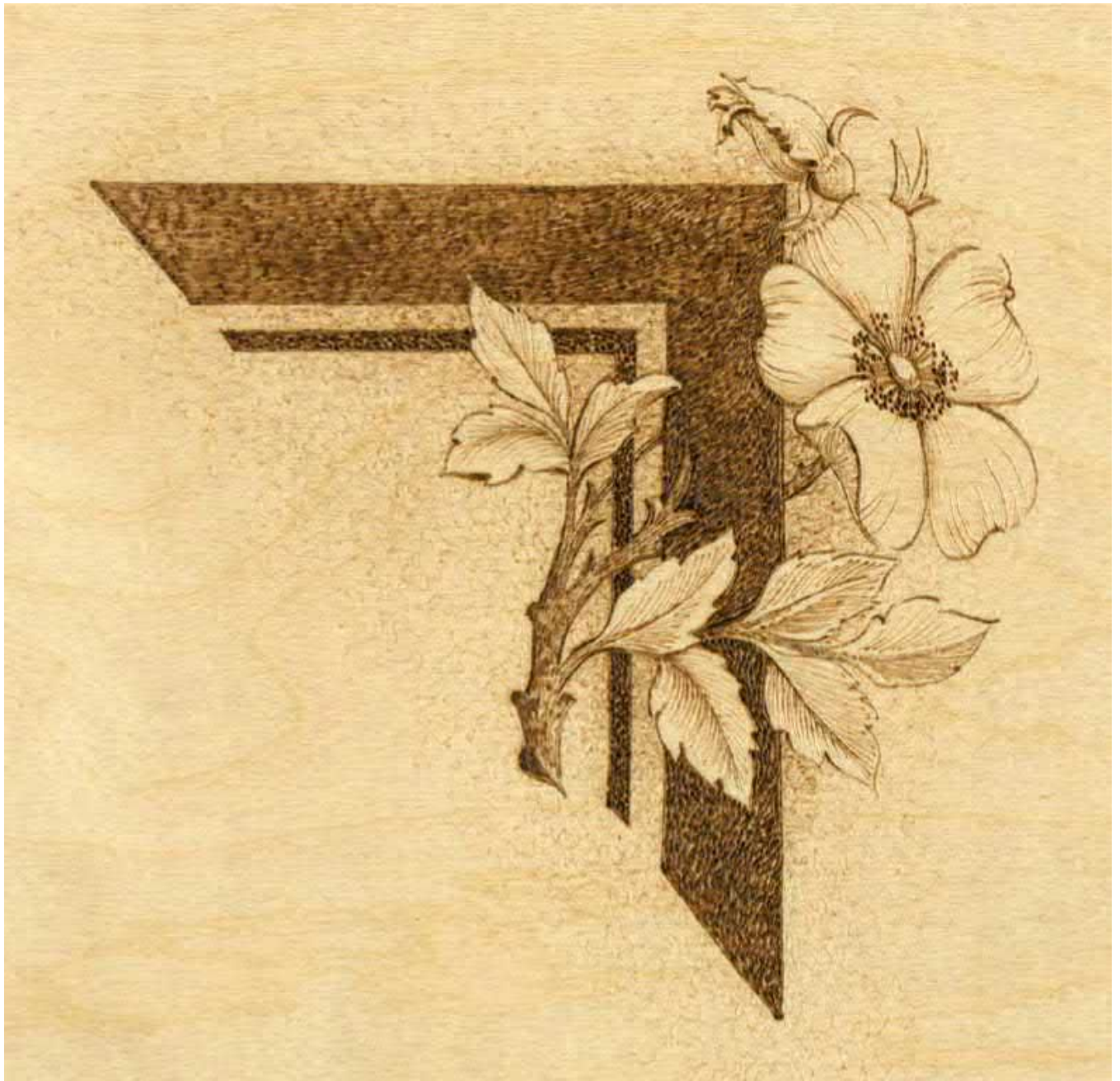
Ivy Line





Wild Rose Corner





My Room Gingerbread Man



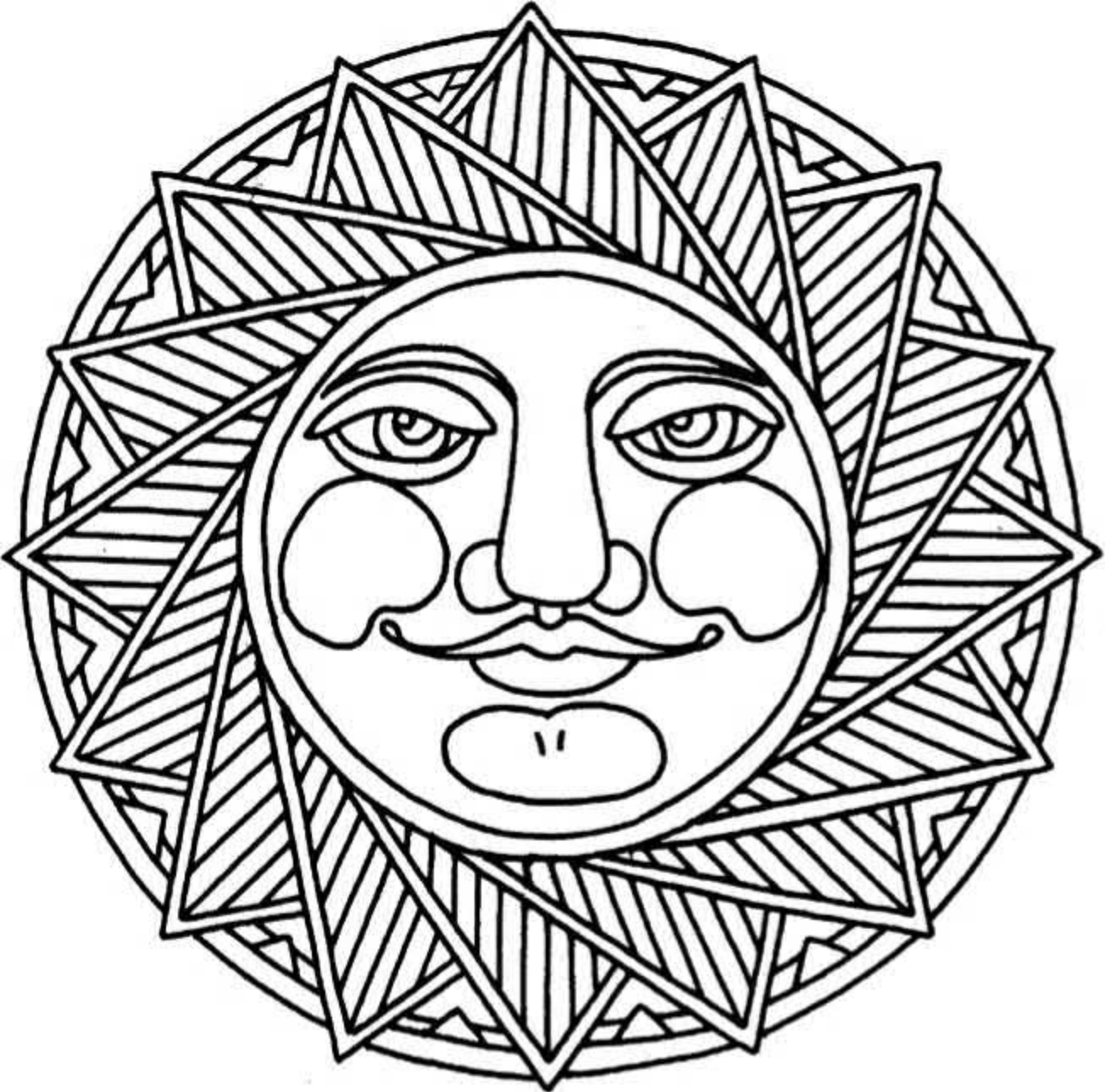


Single Briar Rose





Summer Morning Sun Face





Dancer

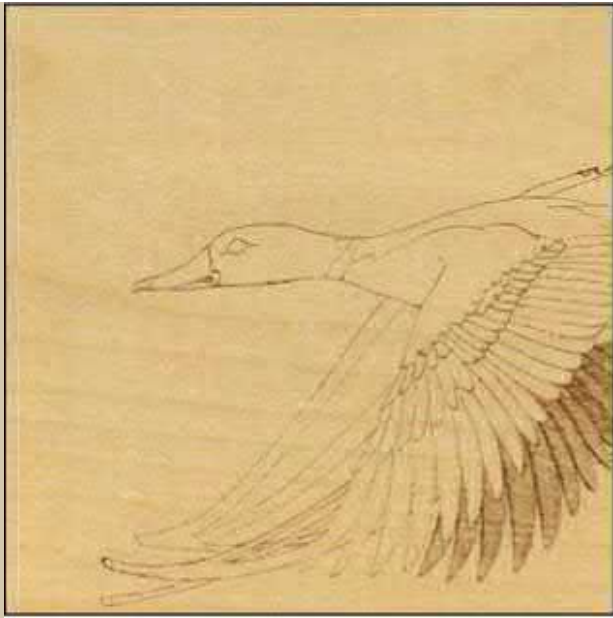




Intermediate Projects

The *Mallard Drake* is a realistic pattern, so tonal values and contrast become much more important than in the *Dragonette* design. As we work through this step-by-step, pay special attention to establishing definite light, medium, and dark tones. Again, variations in your burned value tones may vary from those shown here depending on your tool tip and woodburner style. The focus of this project is on learning how to create contrasts for different areas of the work.

Once you have mastered creating multiple contrasting values and shading by woodburning *Mallard Drake*, you are ready for the *Buffalo Skull Dream Weaver Circle* and the *Solar Flare Sun Face*, both of which incorporate a wide variety of textures and tones. *Old-Timer Fireman* and *New York's Finest* let you practice the human face, while *Western Horse*, *American Eagle*, and *White-Tailed Deer Lodge* are examples of the wildlife portraits you will be ready to work. The intermediate section also includes *Berry Green Man* and *Oak Man*, two popular themes that combine the human face and nature.



Creating the *Mallard Drake* Step-by-Step



This mallard drake, with his beautifully colored wings, green head, and rust chest, is captured in front of a graceful stand of autumn cattails. The three-dimensional look of the duck is created through tonal value textures. When the burning is completed, coloring can be added using artist-quality colored pencils. The original burning was done on birch plywood and measures 11" × 6½" (27.9 × 16.5cm).

Before you begin, read through all of the steps. Notice that every section of the project is worked from back to front or from bottom to top. This process allows you more control over each section: It is much easier to lay an area of detailing over the pattern outlines of an already burned area than it is to cut in a background area around an already burned foreground element. In the *Mallard Drake*, the highest foreground element is the wing's shoulder area, the last area to be worked.

Because the entire *Mallard Drake* was created using curved lines (Squares 69–70); half circles, a variation of scales (Square 48); dash strokes (Squares 1–5); and straight-line strokes (Square 66–68); you will want to choose a new texture for the cattail leaves and heads. I chose the random curl stroke (Squares 33–37). By changing the texture pattern, you are visually stating that this element is different. In this project, the random curl lines show that this area of the work features leaves, not feathers. For the cattail heads, a dash stroke creates the black-chocolate coloring. To keep these areas different from the dash stroke areas of the mallard, I worked the spots in a different direction—up to down instead of side to side.

This project was worked using the variable-temperature tool with the writing tip on birch plywood. If you are working with the one-temperature tool, please use the universal tip. Heat settings are noted for each step of this project.

As you burn this intermediate project, you'll see that it really is no harder to create than the beginner's project—there are just more steps!

Skills List

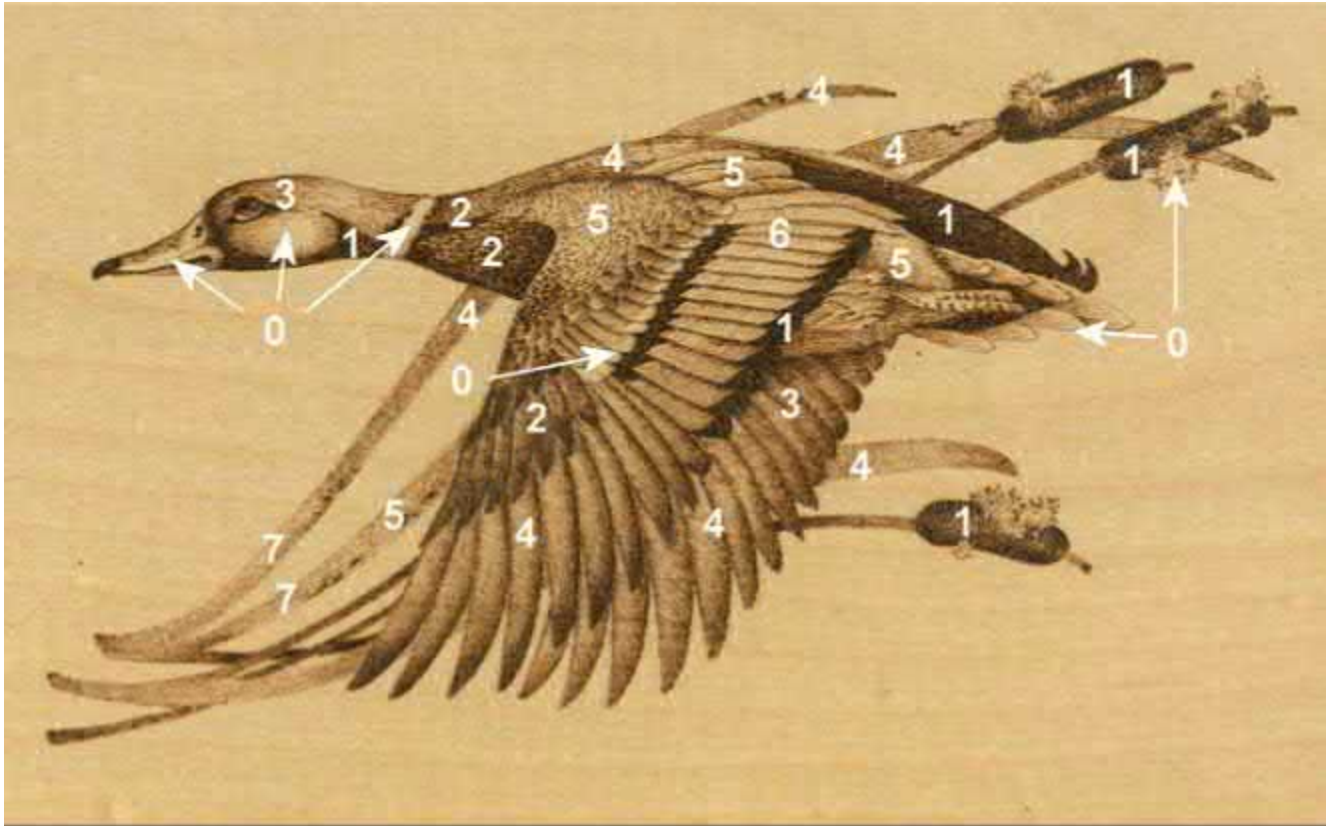
Tool:	Variable-temperature or one-temperature tool
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Tip: Writing tip or universal tip

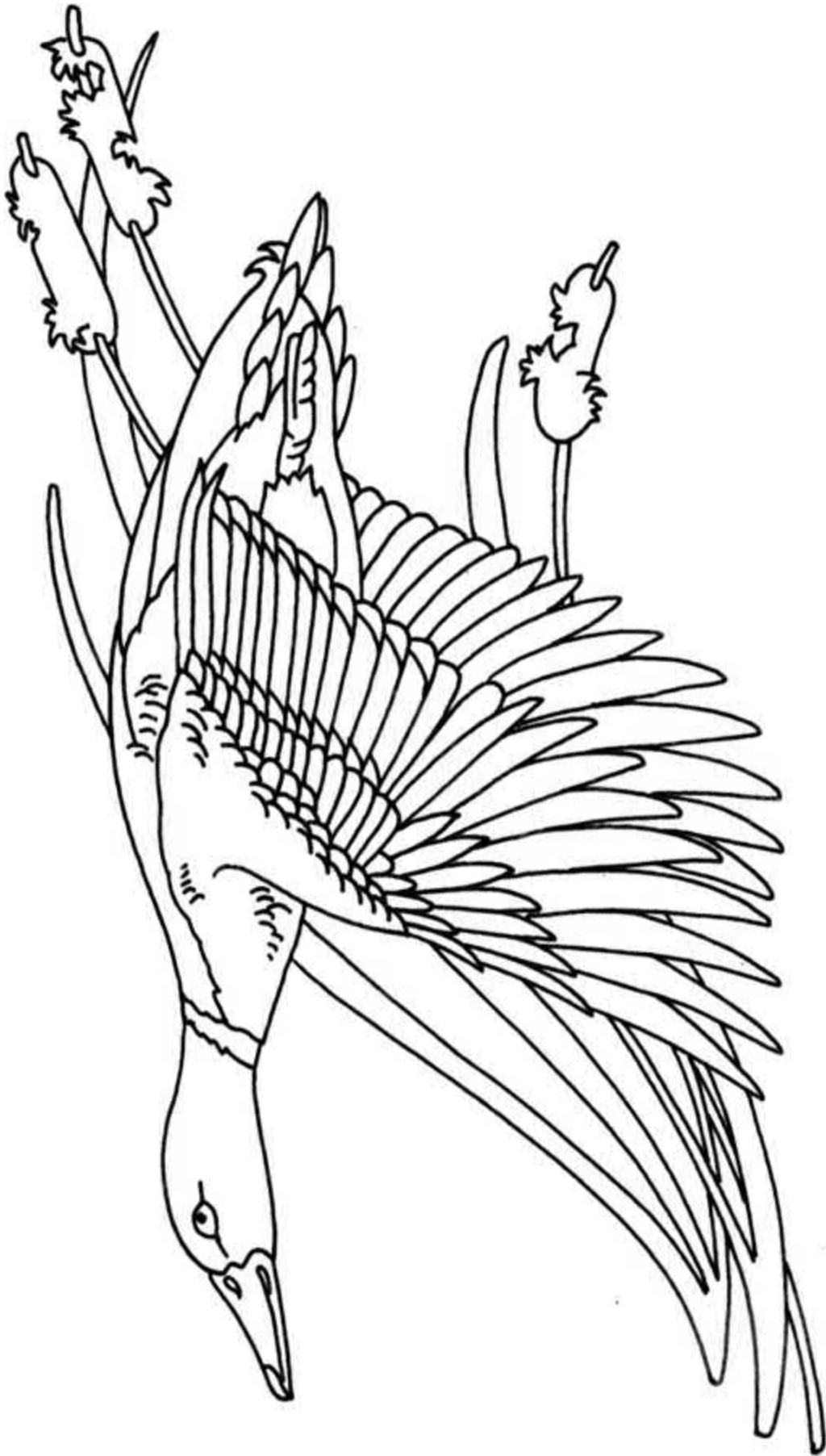
Wood: Birch plywood, 11" × 6½" (27.9 × 16.5cm)

Textures: Curved lines (Squares 69–70)
 Scales (Square 48)
 Random curls (Squares 33–37)
 Dash stroke (Squares 1–5)
 Straight line (Squares 66–68)
 Tightly packed spots (Square 56)
 Scrubby-line stroke (Squares 61–64)

Tonal Values



Mallard Drake





Step 1–6: Transferring the pattern, pale outlining

- Step 1:** Begin by lightly sanding your plywood with fine-grit sandpaper. Remove any dust with a lint-free cloth or a drafter's dusting brush.
- Step 2:** Make a copy of the pattern from this book on vellum or onionskin tracing paper. Rub the back of the tracing paper with a soft pencil until you have created a dark, even layer of graphite.
- Step 3:** Tape the pattern paper to your board and retrace the pattern lines using a hard #H to #2B pencil or ink pen. Trace only those lines that you need to guide you through the work.
- Step 4:** With a white artist's eraser, rub off any smudges or streaks left during the tracing process.
- Step 5:** Set your tool to a cool or medium-cool setting; outline the pattern lines. You want this outlining to be a soft, caramel color. You can darken any outline to give it more strength after the tones and shading have been completed. Notice that the outer edge of each long flight feather in both the front and back wings and the large tail feathers are included in this outlining step. Do not burn the small shoulder feathers at this time.
- Step 6:** Leave your thermostat on the cool or medium-cool setting. Start burning the back wing feathers. These feathers are worked in two layers of burning. For the first layer, pull curved-line strokes (Squares 69–70) into each wing feather. Allow some spacing between the lines so that some of the original wood coloring shows. Each curved line has a downward motion and is worked from the front edge of the feather to the back edge. The inside coloring of the mallard's wings is a light beige tone, so you will want this wing area burned to a paler tonal value than you will be burning the front wing.



Using a cool or medium-cool setting, trace the outline of the bird and the wing feathers.



Use curved-line strokes to fill the back wing feathers.

Step 7–8: The back wing

- Step 7:** When the first layer of burning on the feathers has been completed, turn the project board upside down and begin your second layer of burning.
- Step 8:** For this layer, lay the tip into one of the already burned curved lines, starting the stroke on the back edge of the feather. Pull the curved line halfway into the wing's thickness to make the back half of the feather darker than the front half. (When finished, you will have done a second layering of burning on the curved lines, but only on one-half of the first burned lines.)



The second layer of burning on the back wing creates dimension.



You may find it easier to re-burn the back wing by turning the project upside down.

Step 9–10: Russet breast and tail underside

- Step 9:** The breast area and the tail's underside are both very dark on the drake. Turn your temperature setting to medium-high and use a dash stroke (Squares 1–5) to fill these areas with dark spotting. Notice on the close-up photo that the dashes at the top of the breast allow some wood color to show through, and then the dashes become more tightly packed as they move away from this highlighted area toward the wing shoulder.
- Step 10:** The tail's tip is filled with tightly packed dashes to create a black-chocolate coloring.



Fill the duck's breast with a dash stroke.



Make the dash stroke closer together toward the shoulder and the bottom of the breast.

Step 11–16: Underbelly & undersides of tail feathers

- Step 11:** The underbelly of the drake has the same beige-to-cream coloring as the inside of the wings. This area needs a pale tonal value, so set your thermostat to a cool-medium setting.
- Step 12:** Use a scrubby-line stroke (Squares 61–64) to work this area. Notice the highlight area that was left unburned in the underbelly just above the leg.
- Step 13:** Add a second layer of scrubby-line strokes where the underbelly touches the wing, both above and below the leg. This second layering adds a light shadow to the belly.
- Step 14:** Work the undersides of the tail feathers in straight-line strokes that start at the front of each feather. These lines are pulled to about one-half the feather's length (see Steps 9–10 for the close-up of the undersides of the tail feathers).
- Step 15:** Because the back wing is behind the underbelly of the duck's body, it needs a small amount of dark shadowing to tuck it under the body.
- Step 16:** Turn your setting up to a medium temperature and re-burn the curved-line strokes in this wing area just under the underbelly. Darken this thin section of wing to a medium tonal value.



Use scrubby lines to fill the underbelly and undersides of the tail feathers.



Leave some of the underbelly untouched.

Step 17–19: Forward section of the back

- Step 17:** Burn the forward section of the duck's back on a medium setting using the scrubby-line stroke.
- Step 18:** Place the highlight area for this section where the back begins to disappear behind the top of the front wing. Use wider-spaced scrubby lines in this area.
- Step 19:** Add a second layer of scrubby-line strokes to the front section of the duck's back where it touches the neckband.



Use the scrubby-line stroke again to shade the forward section of the back.



The forward section of the back is lighter than the breast.

Step 20–21: Upper tail section

Step 20: Using a medium-high setting and tightly packed spots (Square 56), fill the remaining portion of the mallard's back. This is the upper tail section.

Step 21: Burn this area to an even black-chocolate tone.



Shade the upper tail section using tightly packed spots.



This section of the tail should be burned to a black-chocolate tone.

Step 22–23: Shading the head

Step 22: The head of the mallard drake has a distinct shape. The head and neck area are curved like the back of a bowl with a second small bowl where the duck's cheek lies. This means that this area of the burning needs shading to create the two distinct rounded areas. With your tool setting still on medium-high and using tightly packed spots, fill in the darkly shadowed areas, as shown in the close-up photo, to a black-chocolate value.

Step 23: Also burn the nostrils, mouth corner, and bill tip at this time.



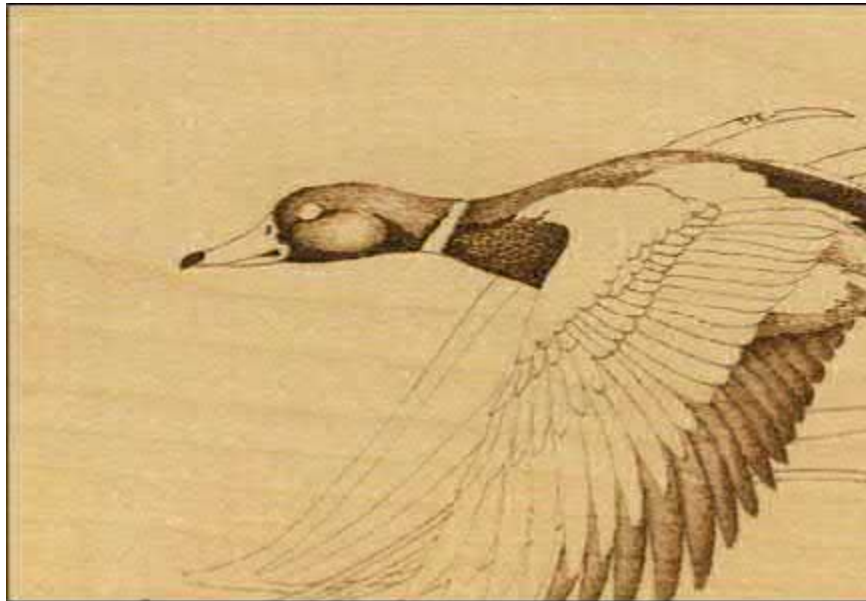
Use tightly packed spots to shape the mallard's distinctive head shading.



The nostril, tip of the bill, mouth, and facial shading should be some of the darkest values on the duck.

Step 24–26: Mid-tone shading for the face

- Step 24:** First note that there are two areas of highlight in the mallard's head and neck area. One is directly behind the eye; this highlights the first bowl area of the head. The second is in the center of his cheek, which highlights the smaller bowl area.
- Step 25:** Work a medium-high setting of scrubby-line strokes in these areas, allowing the stroke to become more widely spaced as you reach the highlights.
- Step 26:** Add a second layer of scrubby-line strokes along the bill and head to blend the dark and medium tones of shading.



The scrubby-line stroke will add a second value to the head.



As you get nearer the highlights behind the eye and the cheek, lighten your strokes.

Step 27–31: The eye

- Step 27:** Again, look for the highlight of the eye. This is an area that you will not be burning.
- Step 28:** Work a medium-high setting of scrubby-line strokes to the eye to create a medium, caramel coloring.
- Step 29:** Add a second layer of burning to the eye using tightly packed spots in the upper section.
- Step 30:** A black-chocolate outline is added to the lower eyelid. Now, most likely, the entire eye has some woodburning color.
- Step 31:** To create the fine line of white at the bottom of the eye and to emphasize the eye's highlight, use a woodcarver's round gouge to carefully carve away a fine sliver of wood in these areas.



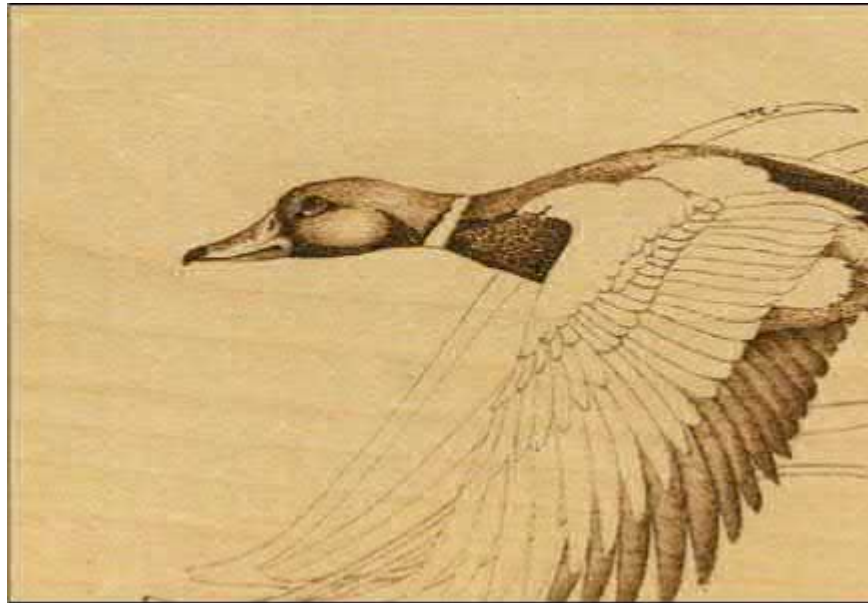
The eye has been shaded to a caramel color using tightly packed spots.



If necessary, delineate the eye from the crease beneath it using a woodcarver's round gouge.

Step 32–35: Shading the bill

- Step 32:** The mallard's bill uses short straight-line fill strokes on a medium-high setting to create the dark patch of coloring along the top of the bill.
- Step 33:** Shade the bottom section of the bill in the same way.
- Step 34:** Add a very small amount of detailing around the bill's nostril.
- Step 35:** Outline the foot while the tool is on the medium-high setting. Notice that, on the drake, these two areas—the beak and the feet—are the only areas completely outlined. This distinguishes these two areas from the feathering of the duck's body.



Shade the top of the bill with short straight-line strokes.



The center of the bill has been left a high value.

Step 36–38: Upper front wing feathers

- Step 36:** A set of four long feathers rests at the top of the drake's wing. These feathers are above the colored feathers and lie over the mallard's back. Detail them using a widely spaced curved-line stroke and a medium temperature setting.
- Step 37:** Work the curved lines from the bottom of the feather, pulling toward the top of the feather.
- Step 38:** Fill in one-half of each feather.



Detail the upper front wing feathers with a widely spaced curved-line stroke.



Use a medium temperature setting to shade the bottom half of the feathers.

Step 39–42: Outer grouping of front wing feathers

- Step 39:** The grouping of long feathers on the outside back edge of the front wing is worked next. These wing feathers will be worked in three layers.
- Step 40:** The first layer is done exactly as the back wing was worked in Steps 7–8.
- Step 41:** Reduce the setting on your thermostat to a medium-cool setting.
- Step 42:** Starting on the front side of each feather, pull a curved-line stroke across the full length. Curve downward as you burn. The curved lines in this first layer are widely spaced.



Shade the outer grouping of front wing feathers.



The curved-line stroke is pulled across the full width of the feather.

Step 43–44: Flight feather details

- Step 43:** The lower section of long feathers on the wing that was just worked contains the longest flight feathers. Turn your project board upside down, and starting at the back of the feather and working a line one-half of the way into the feather, re-burn the curved lines. This will make the outer back edge of each feather darker than the front side.
- Step 44:** Burn a third layering one-quarter of the way into each feather to make black-chocolate tips on this grouping of flight feathers.



The second and third layers of the flight feathers.



Create black-chocolate tips on the flight feathers.

Step 45–46: Coloring wing feathers

- Step 45:** The section of wing feathers above the flight feathers is the next group of feathers to be worked. To create a blending between these feathers and the darker flight feathers, add a second layer of curved-line strokes to the first four lower feathers of this group. Work this layer over one-half of the feather's width.
- Step 46:** When you are finished, you will have a grouping of dark flight feathers, four medium-toned colored feathers, and an upper section of colored feathers that remains pale in value.



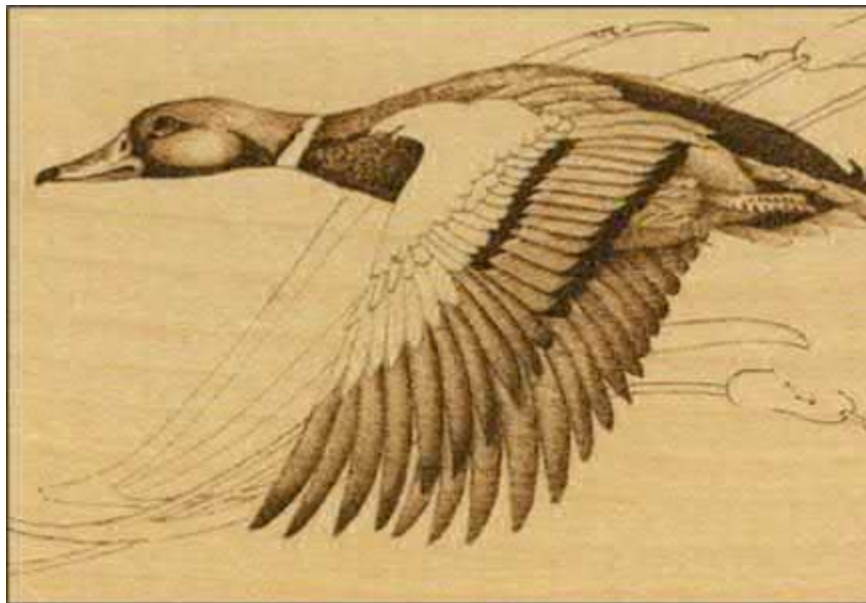
Burn a second layer of lines to lessen the contrast between the back and middle wing feathers.



The contrast between the two sections is not as bold as it once was.

Step 47: Dark half circles on colored feathers

Step 47: The colored feathers of the mallard's wing have two dark half-circle sections: one at the top and one at the bottom of each feather. These are burned on a medium-high setting using tightly packed spots. You want to achieve a black-chocolate coloring for these areas.



Use tightly packed spots to create two bars on the mallard's wing.



The black-chocolate bars are very dark in value.

Step 48: Short flight feathers

Step 48: Above the long flight feathers in the front wing are two groups of shorter flight feathers. These two groups are worked exactly the same as the long flight feathers in Steps 43–44, but with the thermostat set to a medium-high heat.



In the same way as you did the long flight feathers, shade the short flight feathers.



Use a touch-and-lift stroke to shade the feathers.

Step 49: Upper colored feathers

Step 49: Above the colored feathers that have already been worked in Steps 45–46, there is a second grouping of colored feathers. Each feather in this group has a white tip that will not be burned. Following the same direction of flow that you used on the first group of colored feathers, use a medium-high setting and the curved-line stroke to accent the upper section of each of these feathers.



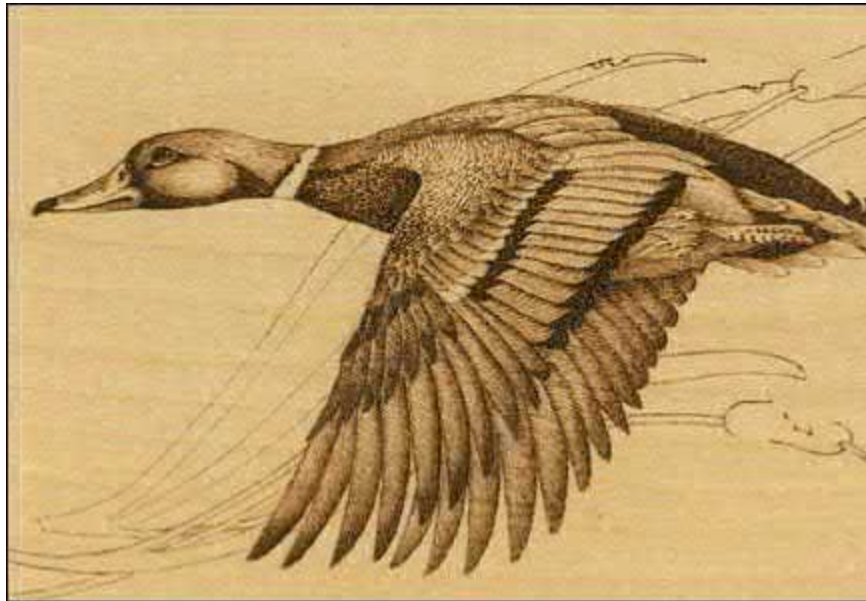
Use a curved stroke to burn the row of feathers immediately above the bar.



Be sure to leave white tips on the ends of these feathers.

Step 50–54: Wing shoulder

- Step 50:** Set your temperature to a medium setting.
- Step 51:** Burn small, tightly packed scales (these are just small half circles) to create the edges of the small round feathers that cover the shoulder. You can see in the close-up that these do not need to be complete half circles or touch any other half circle. Keep the burning strokes long and flowing.
- Step 52:** Re-burn a second layer of half circles on the front lower section of the shoulder to darken this area.
- Step 53:** The highlight area of the shoulder, the area where you will widely space the half circles, is at the top front of the shoulder.
- Step 54:** The neckband, which is a circle of white feathers between the green head and the russet breast of the drake, remains unburned.



Cover the wing shoulder with small, tightly packed scales.



Notice the second layer of scales near the bottom part of the shoulder.

Step 55–58: Cattail leaves

- Step 55:** Fill all of the leaves and stems with the random curl stroke. Use a medium setting.
- Step 56:** Add a second layer of random curls to any section of the leaf that goes under another element, either under the mallard or under another leaf.
- Step 57:** A third layer was added to the stems to dramatically darken these areas.
- Step 58:** A few tightly packed spots were burned where the leaves have torn holes.



Fill the cattail leaves with a random curl stroke.



Any leaves that go under another element should be darkened to add dimension.

Step 59–61: Cattail heads

- Step 59:** Burn the cattail heads using tightly packed spots on a high setting. Notice the highlight area that runs through the center of each head.
- Step 60:** The fuzzy fibers of the cattail heads are medium-setting, thin, curved lines. Work these from the head area outward.
- Step 61:** Add a small black dot at the end of each fuzzy fiber.



Burn the cattail heads on a high temperature using tightly packed spots.



Be sure to leave a highlight area in the middle of each head.

Step 62–68: Finishing

- Step 62:** When the burning is complete, lightly sand the surface of the project with fine-grit sandpaper or a foam-core emery board to remove the roughness.
- Step 63:** Next, rub a white artist's eraser over the burning to remove any pencil lines from the original tracing.
- Step 64:** Remove any dust and eraser particles with a lint-free cloth or a large drafter's dusting brush.
- Step 65:** Set your work where you can look over the project. Check that you have very dark chocolate areas as well as very pale linen colors to create contrast in the work. Are there middle tones of medium brown and coffee-with-cream shades? Does your mallard have a three-dimensional feeling? Even though you have worked through the steps of this project, new layering or shading can be added at this point to strengthen your design.
- Step 66:** This is an excellent time to sign and date your work in the lower right-hand corner.
- Step 67:** Once any touch-ups are finished, re-sand lightly, dust, and seal your project with either polyurethane or a paste wax if you want the project to remain in its woodburned form.
- Step 68:** If you want to add coloring, go on to Steps 69–74.



The finished *Mallard Drake*.

Step 69–74: Colored pencil work

- Step 69:** Artist-quality colored pencils are my favorite way to add coloring to a woodburning. They require no mixing, no special media, and no clean-up steps. Of the three types of colored pencils—regular, oil, and watercolor—I used the regular dry pencils for this piece. Keep the pencils very sharp as you work; resharpen often.
- Step 70:** Apply the colored pencils in very light layers. Four to five layers of color are needed to create a nice, rich color tone. By using light layers, the wax and chalk content of the pencils does not become cloudy or milky-looking over your woodburning's tonal values.
- Step 71:** Use a soft pressure as you apply the pencil color. Do not force the pencil point into the woodburned strokes; instead, let the color lie on the high ridges between those strokes.
- Step 72:** Colors can be mixed by applying one color over another. For example, a light color of burnt sienna applied over several coats of pale yellow will create a light burnt orange.
- Step 73:** Use the color chart below as a guide to coloring the *Mallard Drake*. Apply white to the lower line in the eye, the neckband, the upper colored wing feathers, the upper wing feather group of four, the belly, the tail feathers, the inside back wing, and the fuzzy fibers of the cattail heads.
- Step 74:** When the pencil coloring is complete, give the woodburning several light coats of spray polyurethane to both protect the wood and seal in the color work.



Colored pencil can add flair to your finished woodburning.

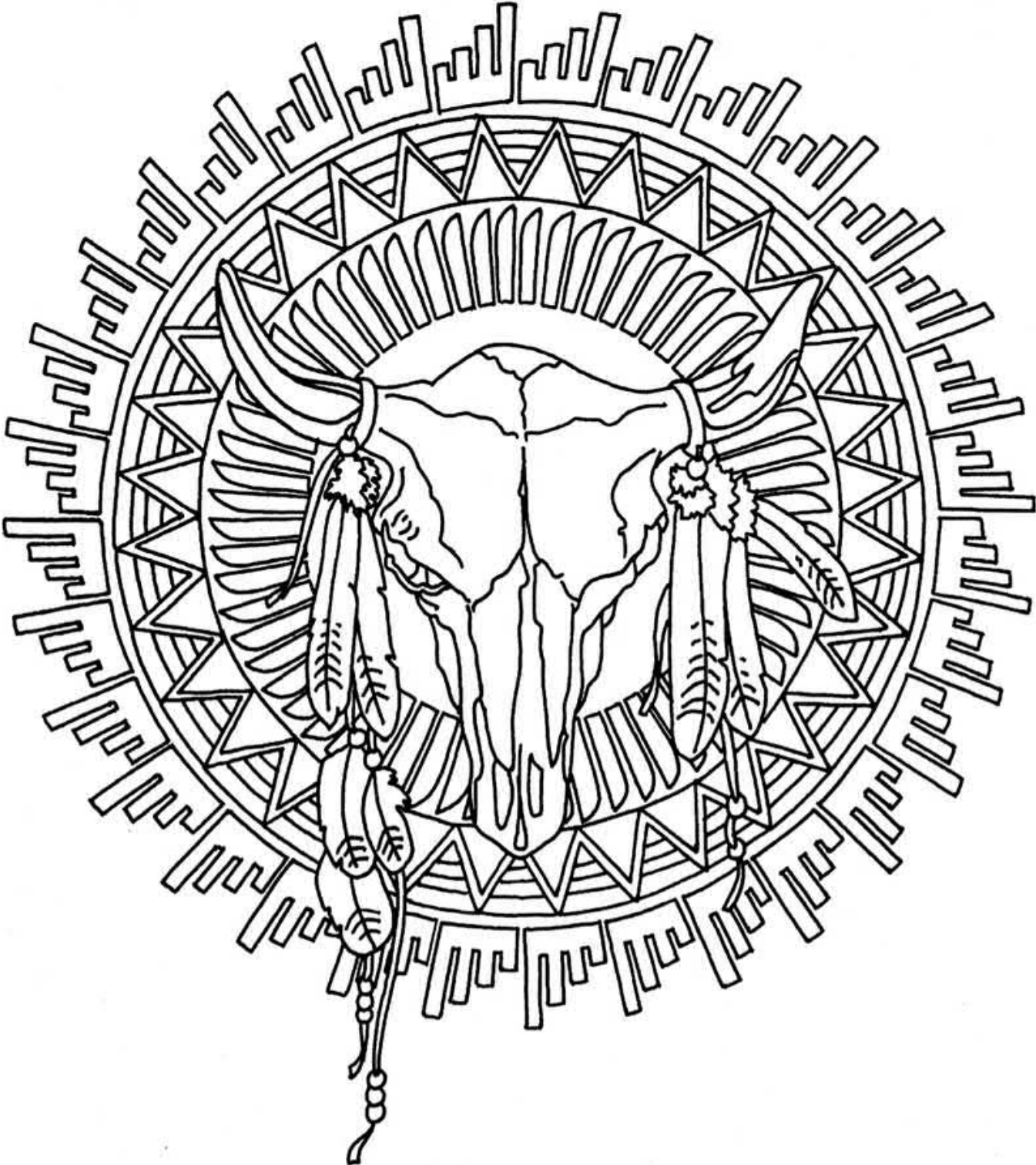


Allow the pencil to skim over the top of the burning—do not force the point into the woodburned strokes.

Mallard Drake Color Chart

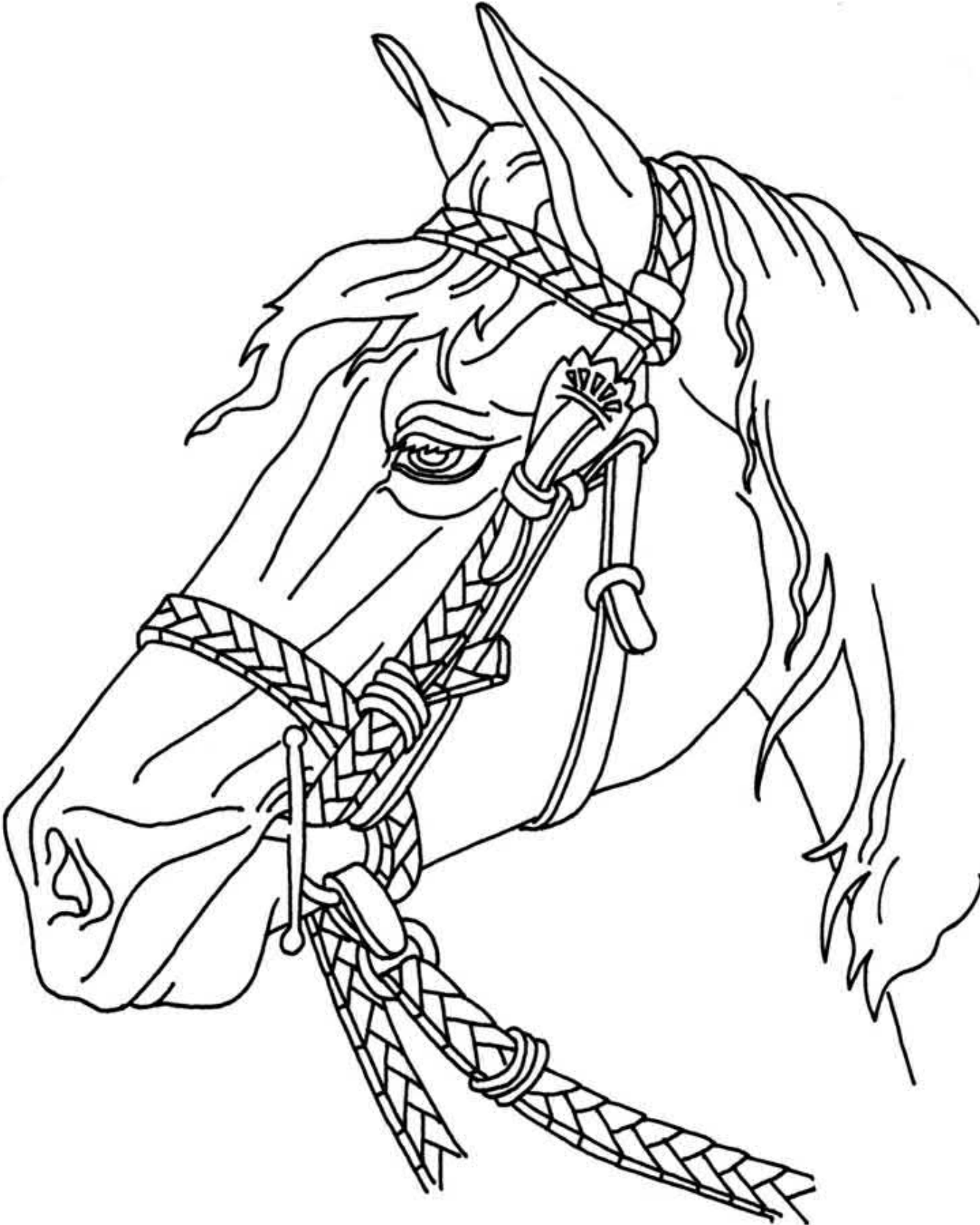
Area	Highlight Color	Shading Color	Dark Shading Color
Bill	Pale yellow	Yellow ochre	
Head and Neck	Pale yellow	True green	Dark green
Breast	Light burnt sienna	Burnt sienna	Burnt umber
Upper Front Back	Light burnt sienna		
Flight Feathers	Medium brown	Burnt umber	
Shoulder Feathers	White	Pale gray	Blue
Colored Wing Feathers	Light blue	Medium turquoise	Dark purple
Cattail Leaves	Pale yellow	Yellow ochre	Light burnt sienna
Foot	Pale yellow		

Buffalo Skull Dream Weaver Circle





Western Horse





Wood Spirit





Old-Timer Fireman





Solar Flare Sun Face



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Mule Deer Portrait





White-Tailed Deer Lodge

WHITE TAIL



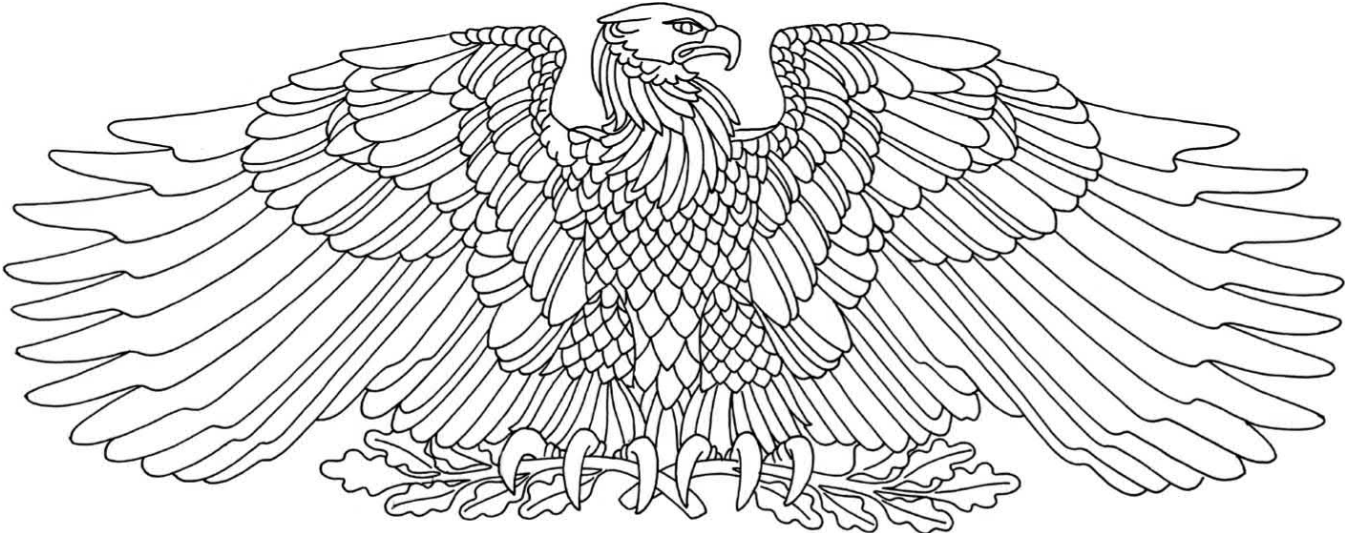
LODGE

WHITE TAIL

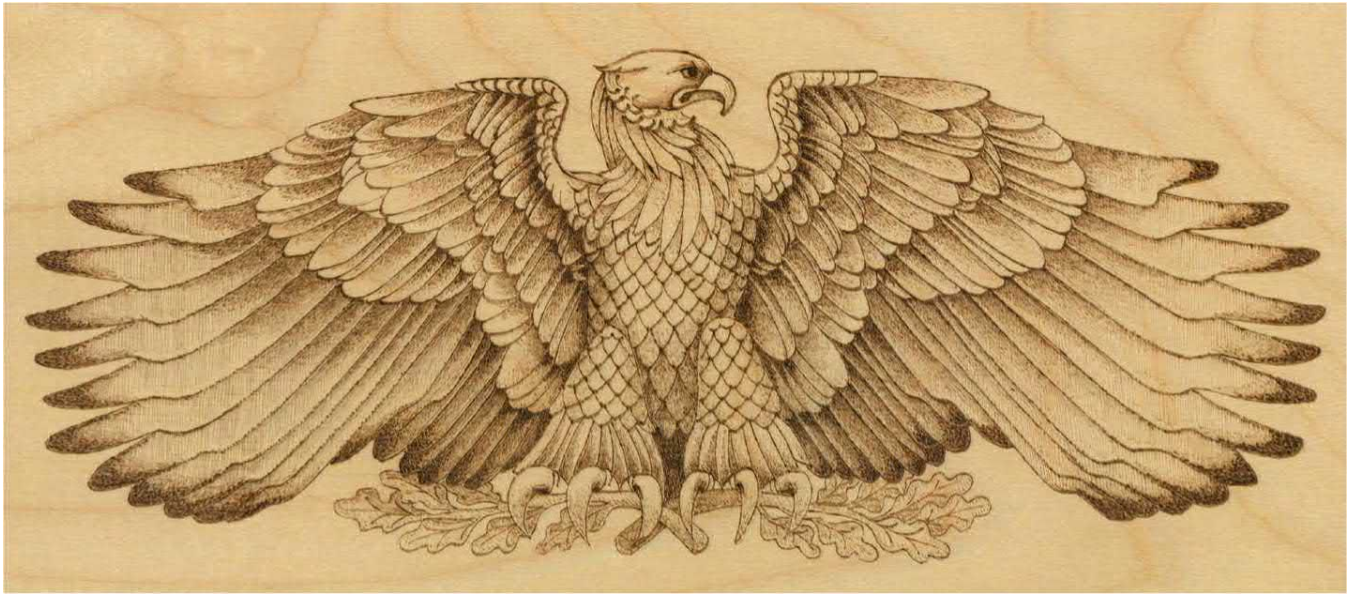


LODGE

American Eagle



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Owl on Branch





Oak Man



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Advanced Projects

For our advanced project, we will focus on a variety of texture strokes that can be used within a pattern or scene to create tonal values and shape. Texture strokes can be used to show a difference between one element and another. For example, the pine trees in this scene use one texture—the dash stroke—to create needles, while the oak trees use a scrubby line texture. Both are trees, and both are located in the background. The use of texture strokes, however, easily distinguishes the pines from the oak trees. How many layers of texture strokes or how hot of a heat setting will establish the changes in the tonal values of this church scene.

The advanced patterns that follow *The Country Church* focus on control of the shading and highlighting tonal values and the detailing and layering of textures in a design. Fine-line detailing accents these patterns, as shown in *Cowboy Boots*, *The Philadelphia Derringer*, and *Hide 'n Seek*. The dramatic contrast of tones found in *The End of the Road*, *Grandpa's Pride and Joy*, and *Harrisburg Star Barn* are done using both texture and temperature to create outstanding black areas against stark white tones. *Horned Owl*, *Our Town Mantel*, and *Church Mantel* will let you explore the use of all of the techniques you have learned from this book.



Creating *The Country Church* Step-by-Step

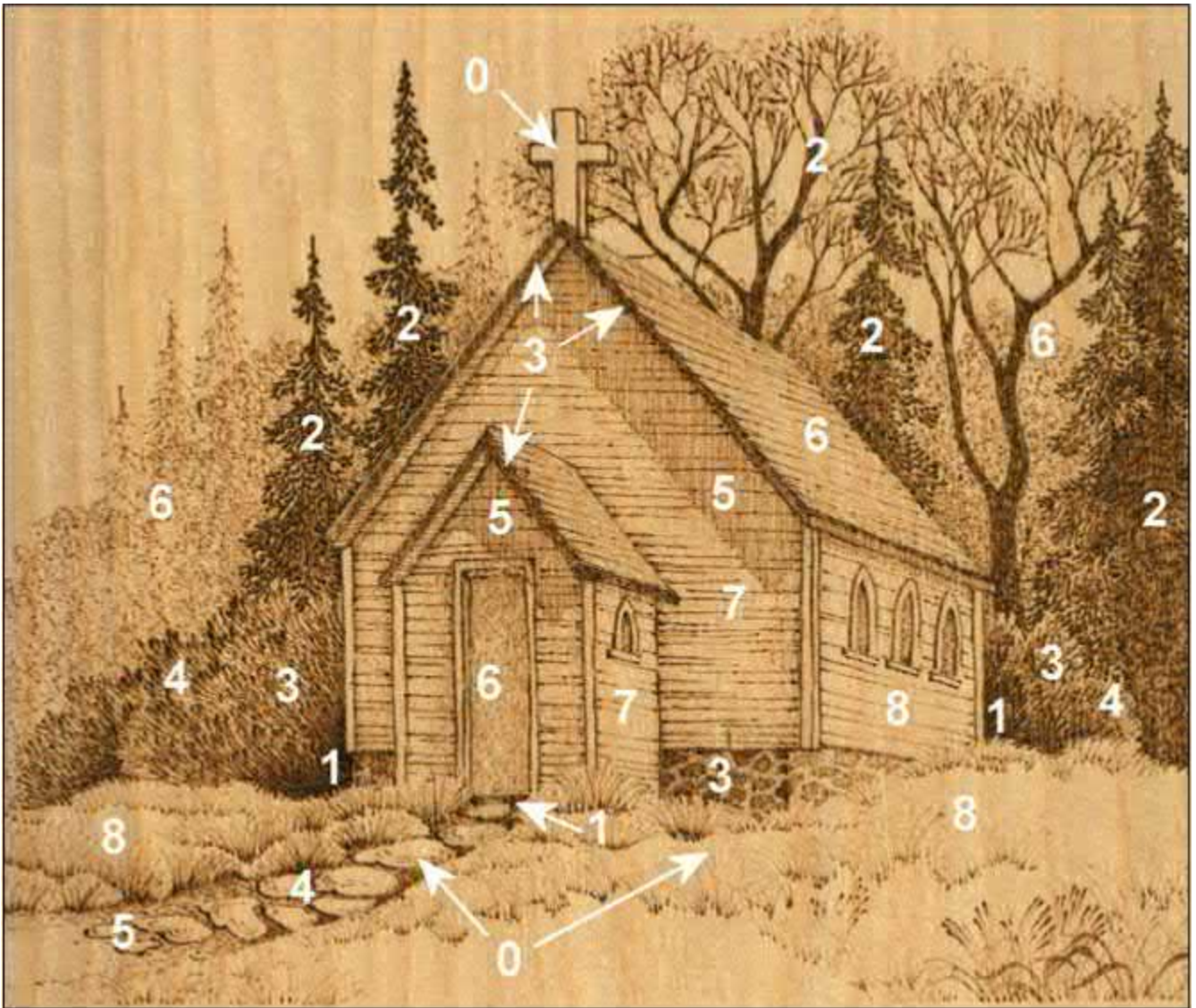
This realistic landscape scene features a small country church nestled in an old grove of pines. Early spring or late fall are implied because of the minimal number of leaves on the tall oak trees. Leading up to the church is a stepping stone path that is surrounded by tall, growing grasses. This project has been burned on white birch plywood and measures 8" × 6½" (20.3 × 16.5cm). As you work through the steps to create this country church, you will be changing the temperature settings on your thermostat. This burning was done using the writing tip.

The practice project in this chapter was worked using the variable-temperature tool with the writing tip on birch plywood. If you are working with the one-temperature tool, please use the universal tip. Heat settings are noted for each step of this project.

Skills List

Tool:	Variable temperature or one-temperature tool
Tip:	Writing tip or universal tip
Wood:	White birch plywood, 8" × 6½" (20.3 × 16.5cm)
Textures:	Dash stroke (Squares 1–5) Scrubby lines (Squares 61–64) Random curls (Squares 33–37) Random zigzags (Square 40) Straight lines (Squares 66–68) Curved lines (Squares 69–70)

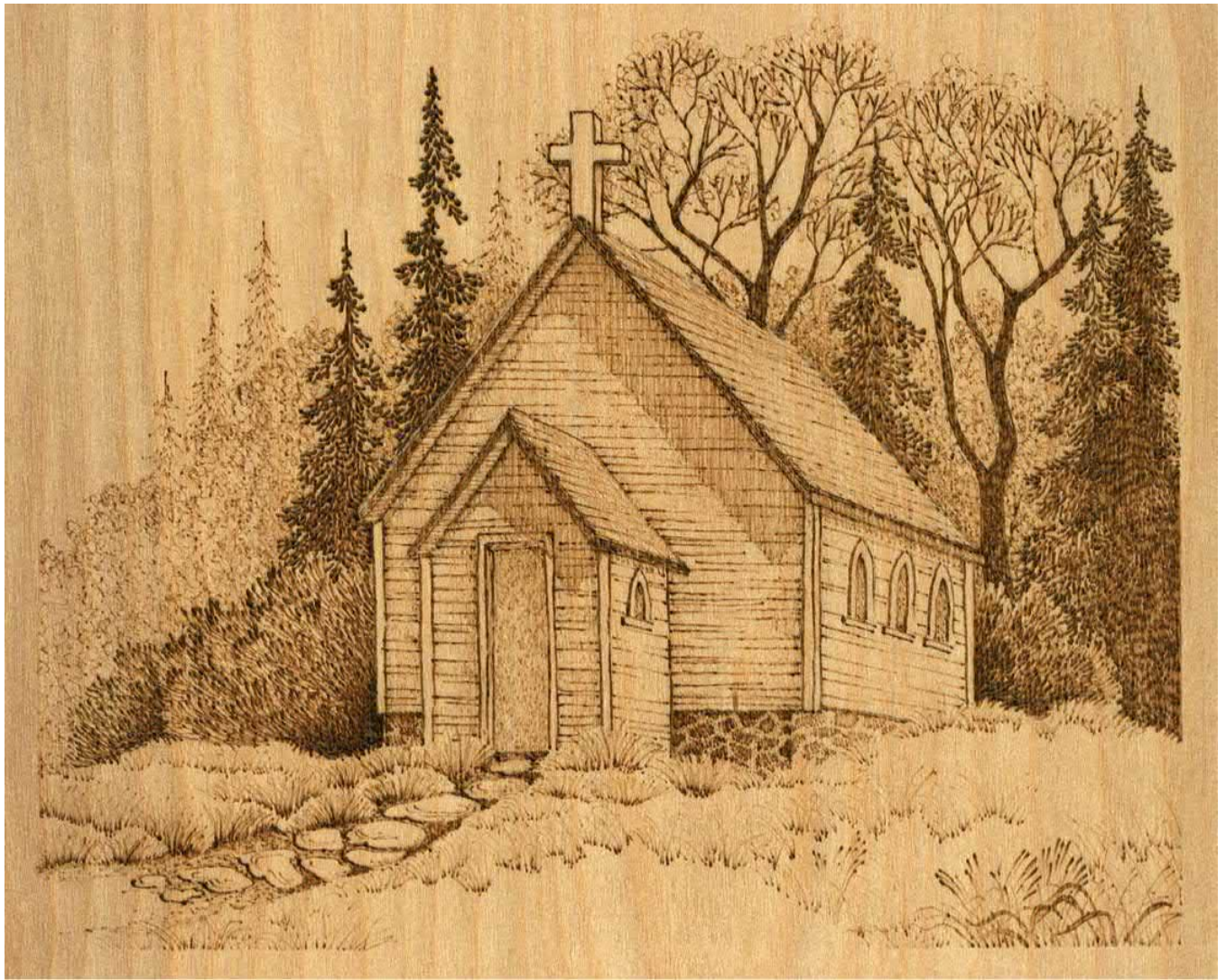
Tonal Values



The Country Church

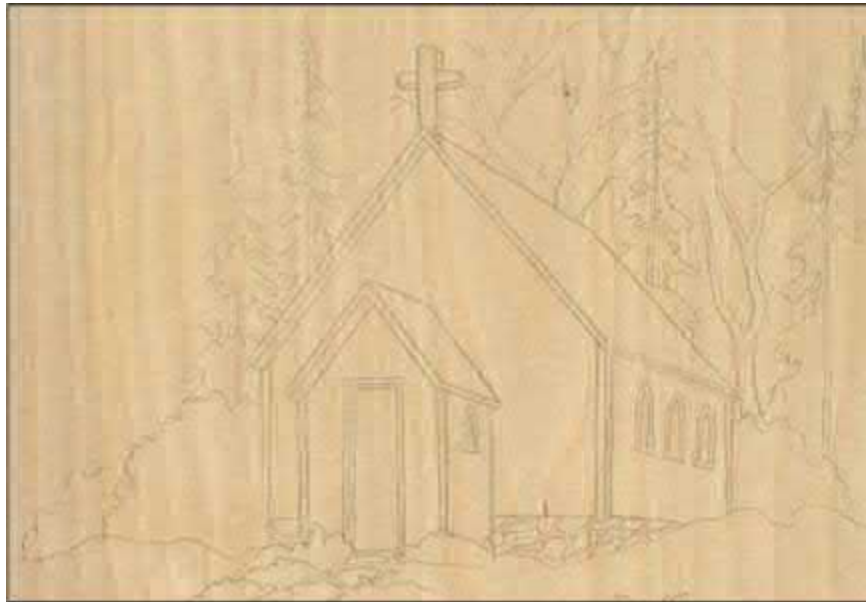


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Step 1–6: Transferring the pattern

- Step 1:** Begin the work by lightly sanding your plywood with fine-grit sandpaper.
- Step 2:** Remove any sanding dust with a lint-free cloth or a large drafter's dusting brush.
- Step 3:** Make a copy of the pattern from the book on vellum or onionskin tracing paper.
- Step 4:** Rub the back of the tracing paper with a soft pencil, #4B to #6B, until you have created a dark, even layer of graphite.
- Step 5:** Tape the pattern paper to your board and retrace the pattern lines. Trace only those lines that you need to guide you through the work.
- Step 6:** With a white artist's eraser, rub off any smudges or streaks left during the tracing process.



Transfer the pattern onto the wood with vellum or onionskin paper and graphite.



Be sure to erase any smudges with a white artist's eraser.

Step 7–13: Large background pines and oak trees

- Step 7:** This pattern will be worked from the background to the foreground, starting with the tall pines and trees behind the church. Use the writing tip at a medium-high temperature setting.
- Step 8:** The first area to be burned is the background, which includes the large dark-toned pine trees and the two dark deciduous oak trees. Notice in the close-up that the branches of the large background tree flow in a downward curve from the top point of the tree or tree trunk area. Each pine branch is slightly lower at its end than where it started at the tree trunk. If your board is in an upright position, the sky at the top, you will have to push this burned stroke away from you to create the proper curvature. Instead, turn your board upside down so the ground line is at the top of the board. Now you can easily pull the branch strokes toward you as you work.
- Step 9:** The pine trees are created with short dash strokes (Squares 1–5). These start at the edge of each tree branch and are pulled into the tree trunk.
- Step 10:** Turn the board upside down so that you are pulling the wood burning strokes toward you during this step. Begin the pine at the tip of the tree and work toward the ground. The dash strokes are clustered into small fan shapes to imply pine needle branches. Pull the strokes slowly to achieve a medium-dark coloring.
- Step 11:** Work the oak tree trunk and branches while you are holding the board upside down. Use a short scrubby-line stroke (Squares 61–64) to fill in the tree trunks. Again, work slowly to allow the burning to reach a medium-dark coloring.
- Step 12:** Outline the branches of the trees.
- Step 13:** As you work closer and closer to the canopy of the tree, the branches will become greater in number, shorter in length, and smaller in thickness than branches that lie close to the tree trunk. Be creative in how your finest branches twist, turn, and overlap each other.



This design is worked from the background to the foreground, beginning with the trees behind the church.



Form the branches and needles of the trees using dash strokes and scrubby lines.

Advanced Project Note

There are many times that a burning in a particular area is easier to accomplish by changing the working position of your board. Do not hesitate to change the position of your board so that your burned strokes are worked in a pulling movement, not a pushing motion. Pine trees and background tree branches are often easier to work upside down. By turning your board upside down to work the pine trees, your tool tip starts at the outer edge of the branch and then pulls toward you to the center of the tree. This makes the branch tips darker than the tree center and gives each branch a gentle curve.

Step 14–18: Small background pines and oak forest line

- Step 14:** Behind the tall dark-toned pines and dark oaks is the far background grouping of pale-toned trees and pines. Reduce the setting on your tool to a cool temperature because you will want the burning in this area to be a pale value. Continue to work with your board upside down during this step.
- Step 15:** Work these far background pine trees exactly as you did the trees in Steps 7–13. Because the tool tip is at a cooler setting, these lines of the far background trees will naturally burn thinner than the first hot-temperature-burned pine trees.
- Step 16:** Random zigzags (Square 40) fill the space that represents the small oak trees in this background area.
- Step 17:** Once the area has been worked, add a second layer of random zigzags along the top edge of these trees to slightly darken them, defining the trees from the background pines.
- Step 18:** As you work these far background pines and small trees, you will come to sections that lie behind the dark pines and oaks burned in Steps 7–13. Because these tall pines and oaks were burned to a dark, heavy tonal value, you can allow your lighter burning texture in the far background work to touch and even cross over the darker work. The lighter-toned burning will not change or affect these darker burned areas.



Shade the small background pines and oak forest line.



Use a cooler temperature to burn the background pine trees to a lighter shade.

Advanced Project Note

You can lay cool-temperature, pale-value burning over the already worked dark-toned elements without disturbing those dark areas. This is a quick technique for background work because you can burn the trees that stand out within the background and then add your paler tones to fill in around them.

Step 19–27: Church roofs and cross

- Step 19:** On a medium-high heat setting, outline along the front truss boards and side truss boards along the front edge of each roofline—the church’s roof and the entry door’s roof.
- Step 20:** Also outline the truss boards along the side roofs.
- Step 21:** Outline the cross. The top roofline and back side on both the church roof and the entry roof are not outlined at this stage. These two lines are worked later.
- Step 22:** With a short scrubby-line stroke, fill in the truss boards to a very dark shade of chocolate. They should be as dark as or darker than the background pines.
- Step 23:** The shingles on both roofs are first done by reducing your tool temperature to a cooler medium setting.
- Step 24:** Evenly spaced straight lines are pulled through the roof, parallel to the roof’s bottom edge. These are broken lines; no one line goes the entire width of the roof. These long broken lines imply the rows of shingles.
- Step 25:** Add very short straight lines working parallel to the roof’s side. These short lines imply the individual shingles and reach only from one row line to the next.
- Step 26:** Burn the top edge and back side edge of the roof during this step as if they were shingle lines. Use a broken line for these two areas.
- Step 27:** On the left side of the church roof and entry roof, you will see a small section of roof overhang. With a medium setting, fill this area with widely spaced straight lines that are parallel to the ground or bottom of your project board. This gives a light shadow to the underside of that overhang.



Outline the roof and cross, and then shade the shingles.



Use a short scrubby-line stroke to darken the truss boards to a black chocolate value.

Advanced Project Note

The church sits in the middle ground area of this design and is the main focus element of this project. This area, the middle ground, contains the darkest tonal values of the work. Notice in the finished sample that the shadow areas in the bushes beside the church and under the roof overhangs are the blackest tones. The background dark tones will be paler than the middle ground black tones.

Step 28–30: Adding shadow lines and guidelines

- Step 28:** With a 90-degree drafter's triangle, ruler, and pencil, add a few guidelines to the pattern. Mark where the shadow from the roof would fall on the church's front wall.
- Step 29:** There is a wide shadow under the roof on the right side of the wall and a smaller, narrow shadow on the left side. Mark four guidelines on this front wall that are parallel to the board's bottom edge. These will help in the placement of the wall planks.
- Step 30:** A couple of wall plank guidelines are added to the church's side wall, parallel to the roof's bottom edge.



Add shadow lines and guidelines with a 90-degree drafter's triangle, ruler, and a pencil.



These guidelines will help in the placement of the shadows and wall planks.

Advanced Project Note

As you are working on a project, you can create added guidelines or correct already traced pencil lines any time during the working process. Be flexible and creative in your art, making changes along the way as you develop the work.

Step 31–32: Detailing the siding boards

- Step 31:** Using a medium-high setting, begin pulling straight lines across the walls to imply the board planking. Just as with the roof shingle rows, allow these lines to be broken; not all of the planking lines need to go all the way from one side to the other.
- Step 32:** Where the board planking lines fall into the roof's shadow area, add a second layer of burning to darken the lines.



Pull straight lines across the church walls to imply board planking.



Allow the lines to be broken.

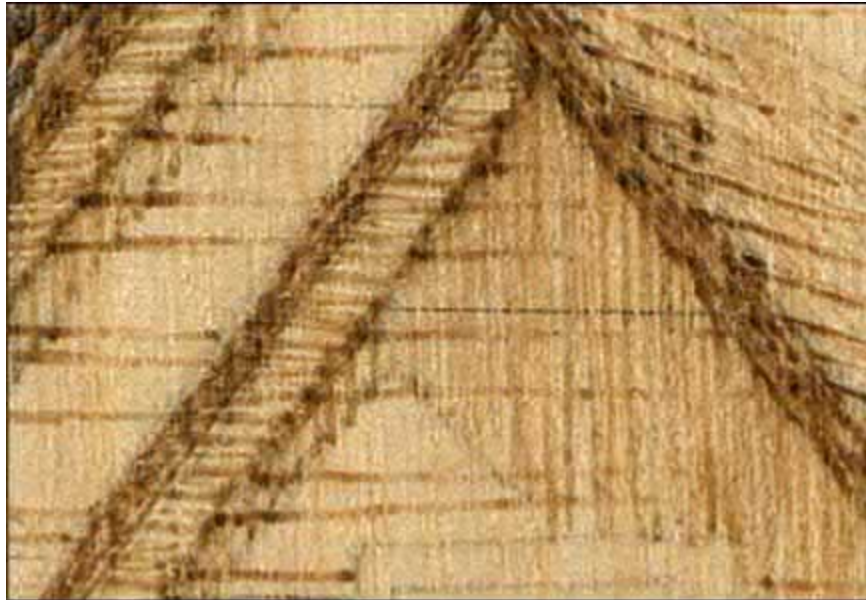
You will notice in the close-up that I started these board plank lines at the wall edge and worked them toward the center of the wall. This places the darkest point of the line at the edge with the paler section toward the middle of the wall. Plan in advance where you want the burned line to begin. Use this tendency of the burn line's starting dark to your advantage.

Step 33–36: Roof overhang shadows

- Step 33:** The shadows on the front walls created by the roof overhang are laid in next. Allow the straight-line fill strokes to flow over the board planking lines. These lines are worked vertically to the bottom of the board.
- Step 34:** Reduce the heat setting to a low-medium temperature so that this new layer of shading will become lighter in tonal value than the overhead shadow and board planking you just burned in Steps 31 and 32.
- Step 35:** The shadows are created with vertical, tightly spaced straight lines.
- Step 36:** The narrow strip of shadow on the side wall underneath the roof line is also burned during this step.



Burn the shadow from the roof overhang with straight vertical lines.



Use the shadow lines to guide your burning.

Advanced Project Note

Just as with the background trees, this area was first worked with darker-toned detailing, then shadowed with a paler-toned burning. An added feature to this area is that the darker detail lines run in a different direction than the pale shading lines. By changing the direction of the shading line, you visually show that it is a different element—shadowing—not part of the wall planking. Had the shadow lines been worked in the same direction as the wall planking, the wall boards could have been overpowered by the numerous shade lines.

Step 37–38: Shading the front walls

- Step 37:** Because the sunlight is coming from the back of the church, the front wall of the church and the front wall of the entry are slightly darker than the side wall.
- Step 38:** Reduce the temperature of your tool to a cool setting, and using a short scrubby-line stroke, burn the entire area of both front walls to a pale tonal value. Because the board planking was burned to a dark tone and the shadows were created in a medium-dark tone, this pale tone can be worked right over top of the previous work without changing either area.



The front wall of the church is slightly darker than the side wall.



Using a cool setting, burn the front walls to a pale tonal value.

Advanced Project Note

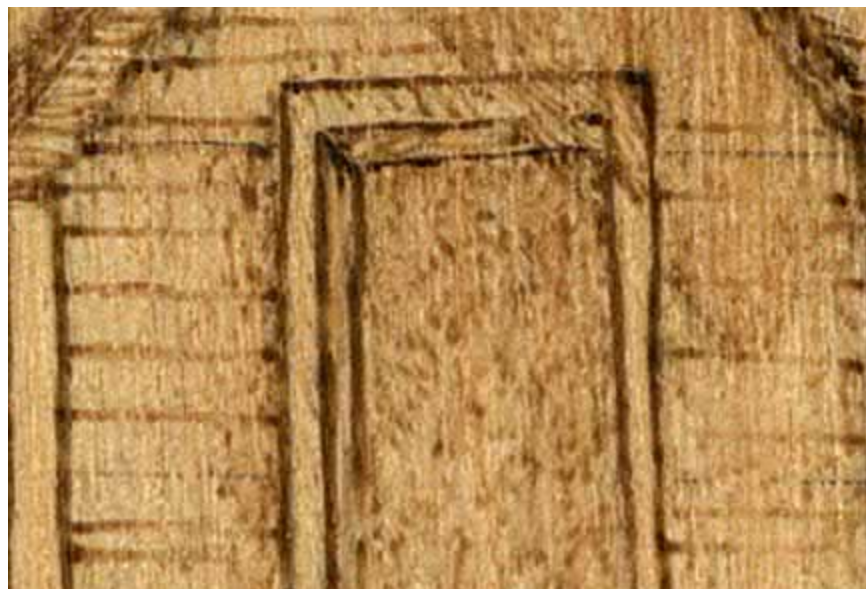
By continually reducing the temperature of your tool tip, you can build up multiple layers of paler tones over medium and dark tones.

Step 39–43: Detailing the doors, windows, and walls

- Step 39:** Turn your thermostat up slightly to a medium-cool setting.
- Step 40:** Fill in the door and the glass areas of the windows with a medium-toned scrubby-line stroke.
- Step 41:** Add outline detailing to the church along the sides where the corner trim boards lie. All of these outlines and those in the next step were worked in a medium to medium-hot setting.
- Step 42:** Outline the door and the windowsills.
- Step 43:** Shadow the left side of the door opening, inside the doorsill, with a medium-dark scrubby-line stroke.



Detail the doors, windows, and walls on a medium cool setting.



Use scrubby-line strokes to fill the door and the glass of the windows.

Advanced Project Note

Change your thermostat setting as needed so that you can control the tonal depth of each element within the area that you are burning. The side wall area of the church contains small areas of medium and medium-dark tones. Changing the temperature setting and working the area as a unit makes this area more coherent than burning some elements while your temperature is set on medium then returning to the wall later for the medium-dark elements.

Step 44–45: Adding door and entry shadows

- Step 44:** In the close-up photo, notice the very thin strip of shading on the church wall to the left of the entry. This shadow is created because the entry blocks that section of the wall from the sunlight. Burn a light layer of scrubby-line strokes along this thin strip to develop this shadow.
- Step 45:** Notice that this shadow runs along the church wall to the left of the entry roofline and the entry wall. A second shadow falls onto the entry's wall to the left of the door because of the doorjamb area. These two shadows are very small areas to work; however, it is this added shading detail that will give your work a more realistic impression when done.



Add subtle door and entry shadows to the burning.



Notice the small strips of shadow to the left of the entry wall and the doorjamb.

Advanced Project Note

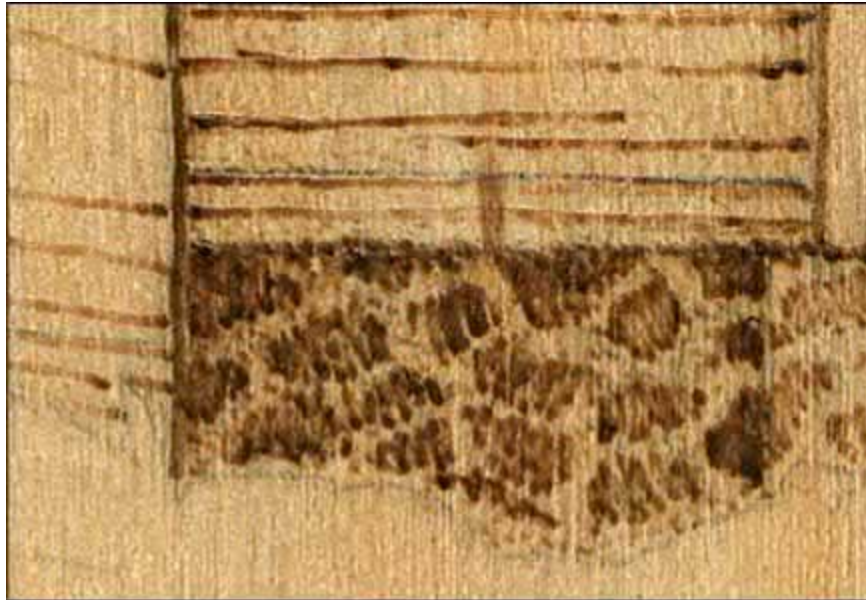
Adding very fine details or extra-fine shading will dramatically add to the realism of your finished burning. Often, it is the small touches that turn a good woodburning into a great one.

Step 46–50: Stone foundation

- Step 46:** The stones in the foundation are made up of very tightly packed straight lines. As you work the stones, let each stone have its own direction for these lines.
- Step 47:** Use a higher temperature setting to make the front wall stones fairly dark.
- Step 48:** The stone foundation under the side wall is worked in the same manner but with a slightly reduced temperature.
- Step 49:** Along the top edge and left side of the foundation wall, add a light layering of scrubby-line shadows. These are done in a medium value.
- Step 50:** Go over the entire stone foundation with a second layering of scrubby-line strokes on medium-cool heat to tone the background of the stone foundation a pale value. You want the stones slightly darker than the surrounding foreground grass.



Burn the stone foundation of the church.



Use straight lines layered with scrubby lines to shade the stones.

Advanced Project Note

You don't have to outline an area to create a realistic impression in that area. In the stone foundation, no individual stone is outlined. Instead, tightly packed straight lines are used to give the stones form and shape. Avoid giving your burnings a coloring book look with the overuse of outlines.

Step 51–53: Large shrubs

- Step 51:** There are three large shrubs next to the church, with two on the left and one on the right. These are worked with a high temperature setting to create strong, dark lines. The texturing stroke is a long, gentle curve that starts at the tip of the shrub and moves toward the center. Create these lines in small clumps until you reach the ground.
- Step 52:** Once the entire shrub area has been filled, add a second layer of long, gentle curved-line clumps in the lower quarter of the shrub to dramatically blacken this section. This second layer will be more tightly packed to increase the black tones needed for the darkest shading of the scrubs next to the church walls.
- Step 53:** The ground shading in the far left scrub, at the ground line, is only worked to a medium-dark tone.



Use a high temperature to burn the large shrubs on both sides of the church.



Layering and a high temperature create the dark values of these curved lines.

Advanced Project Note

The shading in the middle ground shrubs nearest the church is the blackest tone of the burning. You will notice that the two sections of this shrub shading, one on each side of the church, are directly adjacent to the very pale values of the church walls. This creates areas of sharp tonal contrast that attract the eye. The black of the shrub shadowing enhances the white-pale tones of the church, giving the church visual emphasis.

Step 54–55: Stepping stone path

Step 54: The burning on the stone path is worked in the areas surrounding the stepping stones. Only a few accent lines were added to the stones themselves.

Step 55: Use a random curl stroke for the dirt spaces. Set the tool tip to a medium-high temperature.



Shade the dirt around the stones in the path very heavily.



The stones themselves are not burned, except for a few accent lines.

Advanced Project Note

Because darker value tones have more visual impact than pale value tones, the stone walk area is worked very dark. This leads the eye along the stone path to the church door, which was worked in a much paler tone. Just as with the sharp contrast of dark and pale tones in the previous section that focus the eye on the church, you are now using dark tonal values to guide the eye to the most important point in the church: the entry door.

Step 56–57: Foreground grass

- Step 56:** Grass clumps are created with the same long curving lines that were used in the dark shrubs and are worked on a cool-medium setting. Turn the board upside down so that the grass lines are pulled from the ground line up to the tip of the grass blade. Let these lines form semi-circular fans for each clump.
- Step 57:** Not every area in the foreground needs burned grass clumps. For this sample, the grass clumps lie along the sides of the stone path, along the foundation of the church, and along the bottom of the background trees. Most of the foreground area has very little or no grass added.



Shade the foreground grass using long curving lines.



Use a semi-circular fan shape to create grass clumps.

Advanced Project Note

Now you have firmly established the church as the focus of the burning, with the entry door as the most important element. Don't distract the eye with too many fine details or dark details in the foreground. Adding too many grass strokes or too many clumps of grass will pull the eye away from your focus point.

Step 58–60: Large foreground grass clump

- Step 58:** To add just a little foreground focus, add a larger clump of grass to the lower right-hand corner of the design. The basic clump was burned exactly as the grass along the stone path and worked on the same cool-medium setting.
- Step 59:** Add a few seed heads by turning the board back into its upright position and adding a short, dark line stroke on top of each grass blade.
- Step 60:** A few wavy-line, wide grass blades finish the project.



A large clump of grass in the lower right corner adds foreground focus to the design.

Advanced Project Note

Add a little fun to your woodburning designs. The small foreground grass clumps with their seed heads give just a little surprise touch to the front area in the design. Because everything else in this scene is worked to give a general impression, the close-up detailing of each grass blade and the seed heads is unexpected.

Step 61–66: Finishing

- Step 61:** When the burning is complete, lightly sand the surface of the project with fine-grit sandpaper or a foam-core emery board to remove the roughness.
- Step 62:** Next, rub a white artist's eraser over the burning to remove any pencil lines from the original tracing.
- Step 63:** Dust your project well with either a lint-free cloth or a large drafter's dusting brush.
- Step 64:** Set your work where you can look over the project. Check that you have both very dark chocolate areas in the work as well as very pale linen colors to create contrast in the work. Are there middle tones of medium brown and coffee-with-cream shades? Does your church have a three-dimensional feeling? Even though you have worked through the steps of the project, new layering or shading can be added at this point to strengthen your design.
- Step 65:** This is an excellent time to sign and date your work in the lower right-hand corner.
- Step 66:** Once any touch-ups are finished, re-sand lightly, dust, and seal your project with either polyurethane or a paste wax.



These wavy blades of grass were burned using long curved-line strokes.



The finished piece.

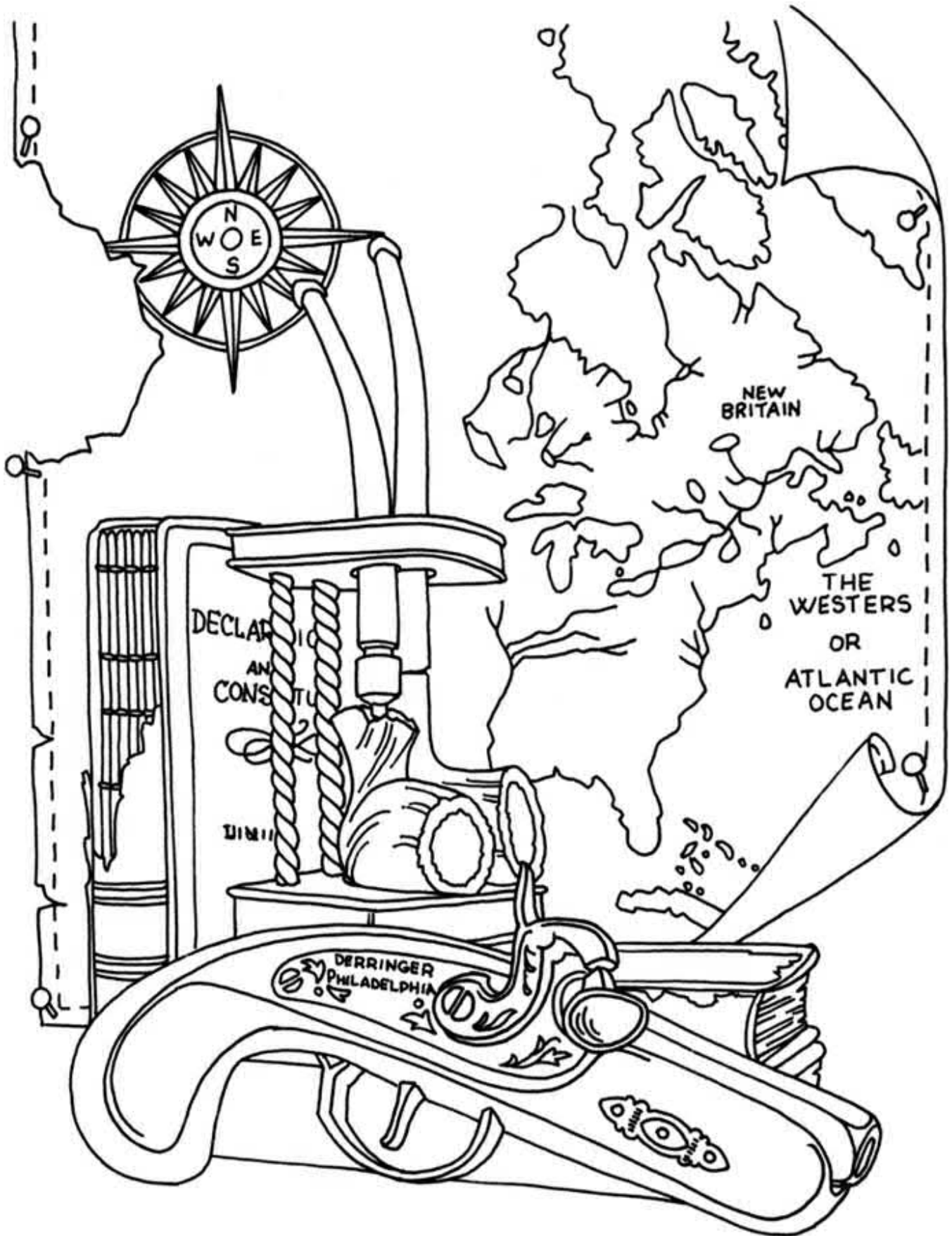
Cowboy Boots

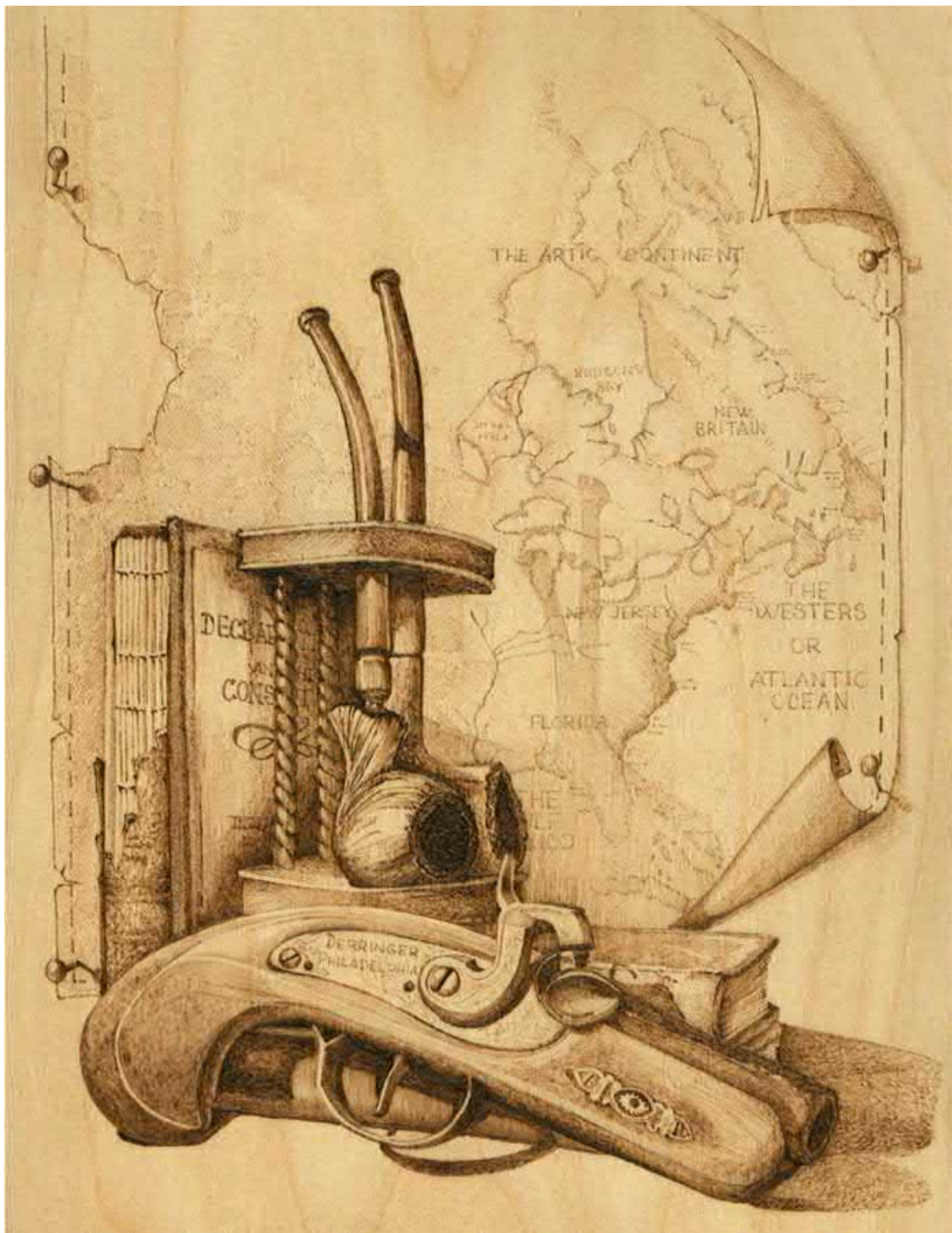


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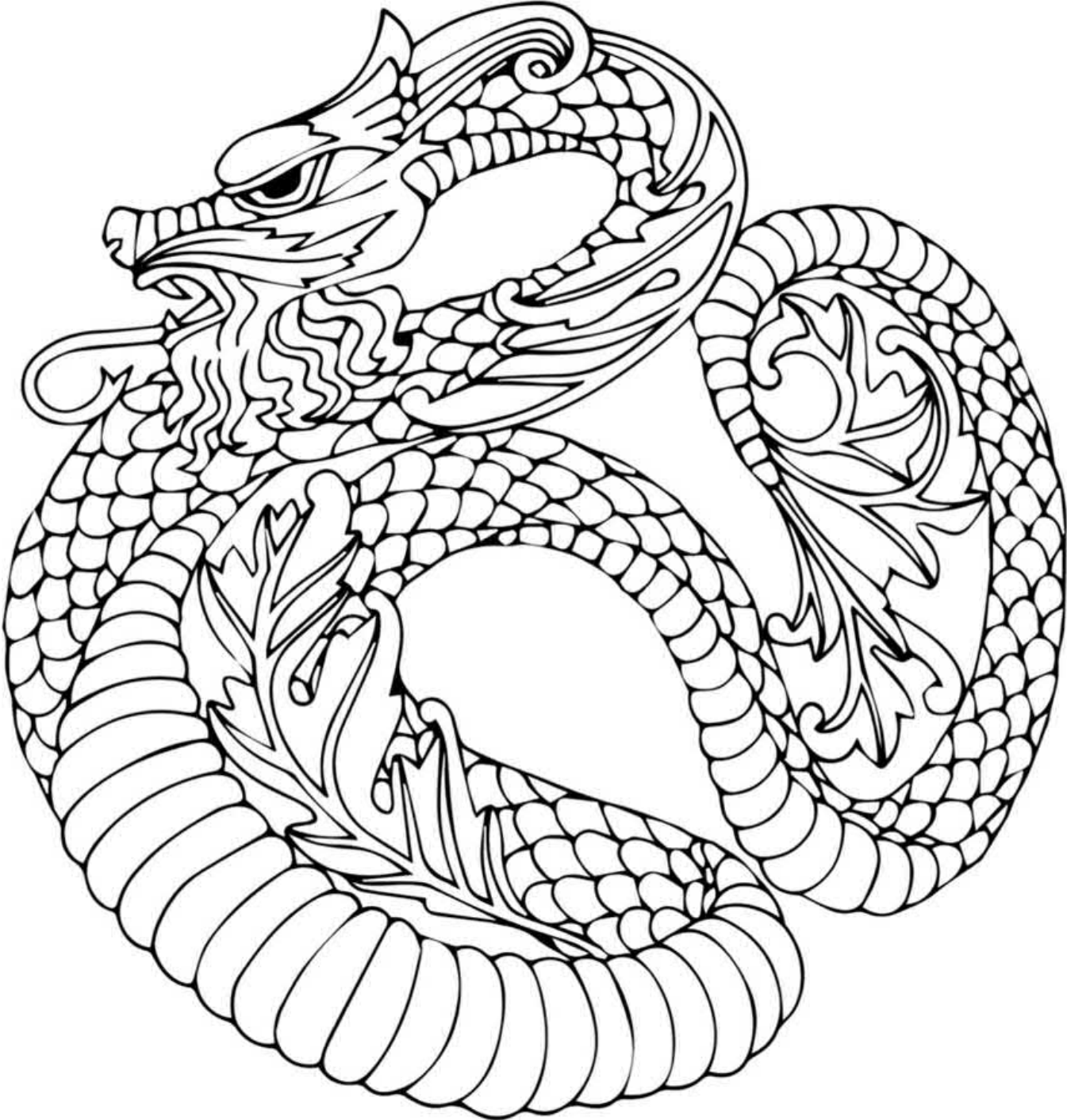


The Philadelphia Derringer





Dragon





The End of the Road



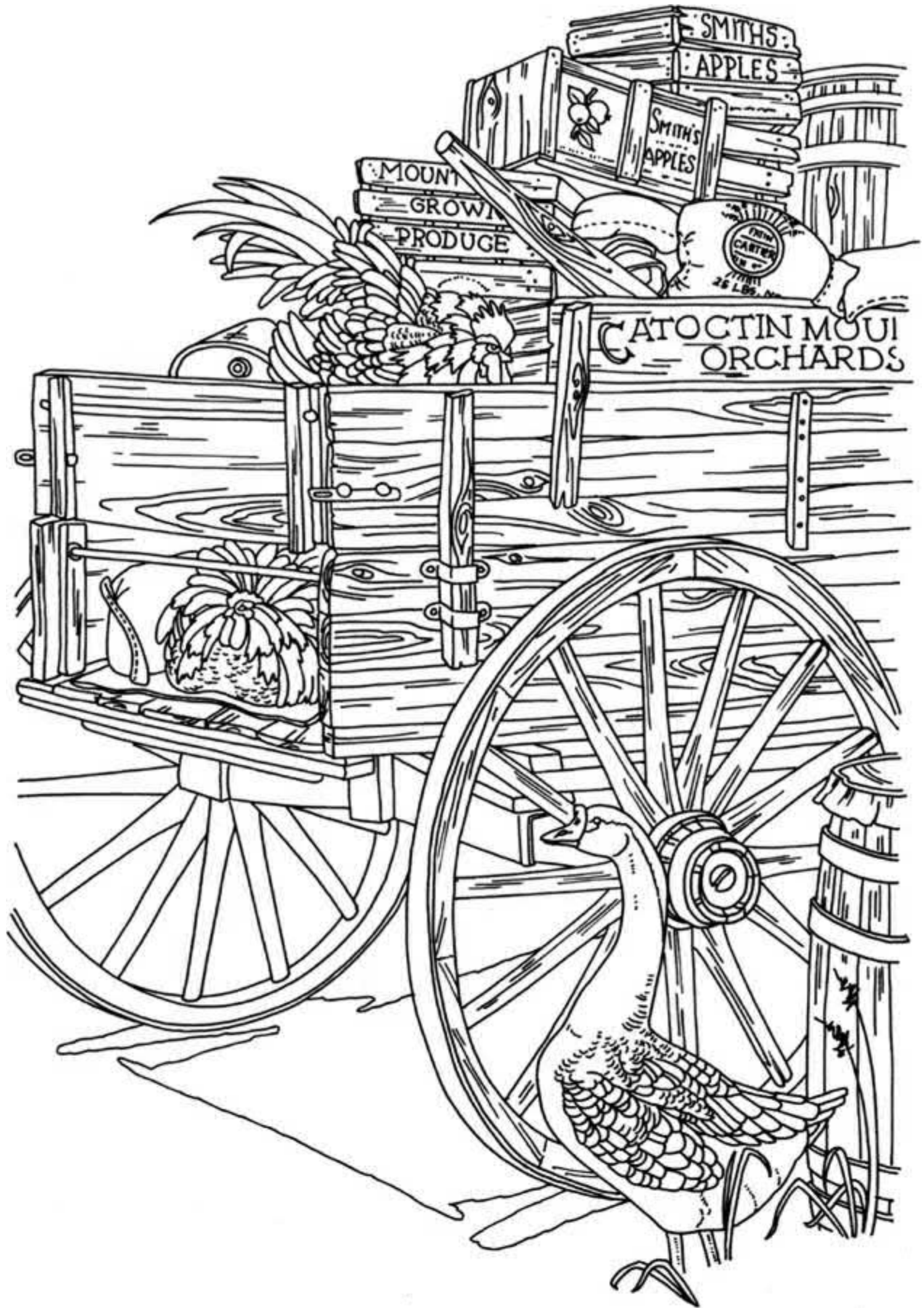


Grandpa's Pride and Joy





Hide 'n Seek



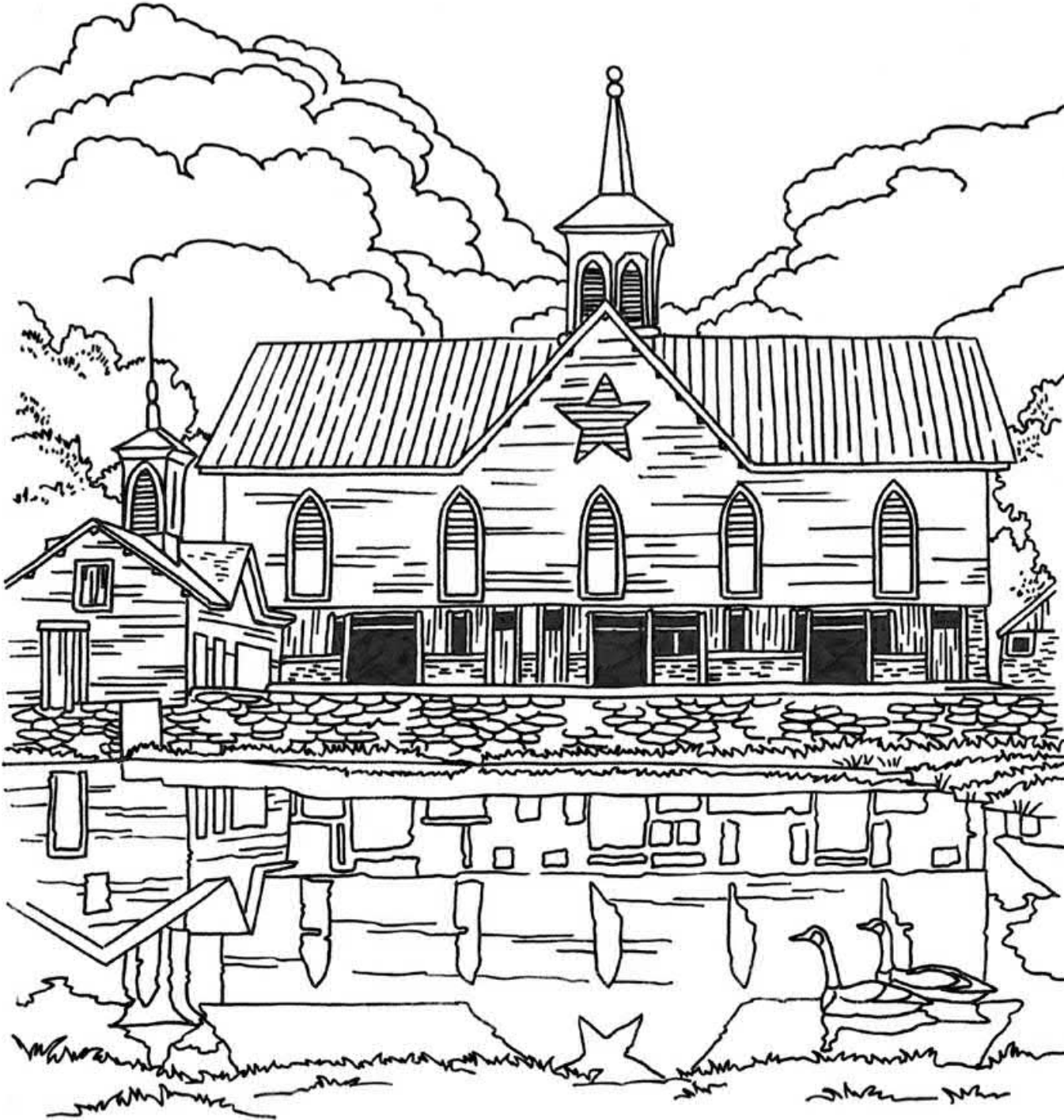


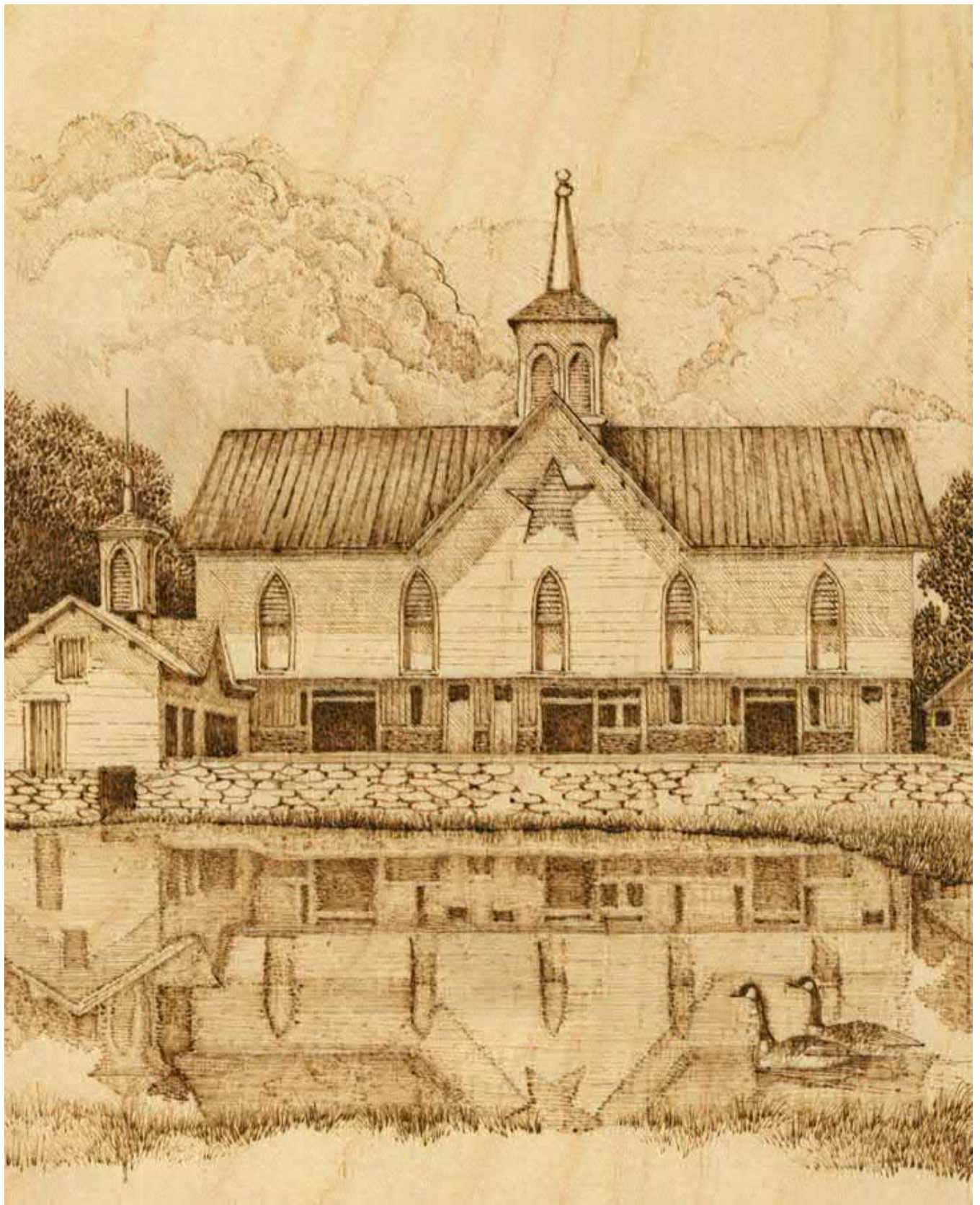
Horned Owl





Harrisburg Star Barn





Our Town Mantel



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Green Man





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Celtic Bird





Glossary

Bleeding: Scorching of the wood surrounding the woodburner's tip beyond the area that you intend to burn. Bleeding is caused by burning at too hot a temperature. Also called haloing.

Calligraphy tip: A one-temperature tool tip used for writing letters.

Cone tip: A one-temperature tool tip used for creating fine detailing.

Contrast: The difference between two tonal values. The strongest contrast is created when white values directly touch the blackest values.

Element: An individual piece or part of a pattern or design. For example, grass, trees, and barn complexes are all elements in a landscape burning. Also called positive element.

End-grain: A piece of wood cut across the tree rings instead of with the grain. This cut of wood is harder to color than plain grain and has many imperfections that will show through the woodburning.

Flat shader: A variable-temperature tool tip used for shading.

Flow tip: A one-temperature tool tip used for large area fills.

Gradient tones: A tonal value area that blends from a pale tone into a dark tone or from a dark tone into a pale tone. This area shows all of the tones in between the starting tone and the ending tone.

Heartwood: The center part of a tree that has tighter grain lines and a darker coloring than sapwood.

Layers or layering: The process of reworking an area with multiple burnings of the same texture. Each layer is not burned directly on top of the others, but rotated slightly in order to burn a different area. These multiple burnings allow the artist a controlled means to gradually darken the area.

Large shading tip: A one-temperature tool tip used for shading large areas and shadows.

Large wire loop tip: A variable-temperature tool tip used for basic writing functions.

Lightfast: Resists fading from light.

Monochromatic: One color. Also includes the use of different tonal values of that color. Woodburnings are monochromatic works of the color brown using shades from pale beige through black chocolate.

Negative space: The area surrounding an element in a pattern. For example, the air around a mountain is negative space.

One-temperature tool: A woodburning tool that heats to only one temperature—high. These tools use a cast solid brass tip that has screw threads for mounting to the tool body. One-temperature tools are good for beginners and are easily found at most craft stores for an inexpensive price.

Plain grain: A piece of wood cut with the grain of the tree, not across the rings. This cut of wood is relatively easy to color with paints or coloring pencils.

Sapwood: This part of the tree surrounds the heartwood. It is lighter and has wider grain bands than the heartwood.

Sepia: Shades of brown ranging from very pale beige through black-brown tones.

Sepia scale: A chart marking each gradient of tonal value from the palest white value through the darkest black value, using brown tones.

Small round tip: A variable-temperature tool tip used for shading and fine detail.

Textures: Small repeating patterns of burned lines that add interest throughout the work, such as curly lines, circles, wavy lines, and short dashes. The term “texture” throughout this book refers to visual patterns, not actual physical texture created by high temperature burns.

Tonal values: The shades of a color created by adjusting the amount of white or black that a color contains. For woodburning, the tonal values range from very pale beige through black-brown shades. Pale tonal values like cream or beige contain large amounts of white mixed with brown. Dark tones, like dark chocolate, contain large amounts of black mixed with brown.

Universal tip: A one-temperature tool tip used for fine-line work as well as shading

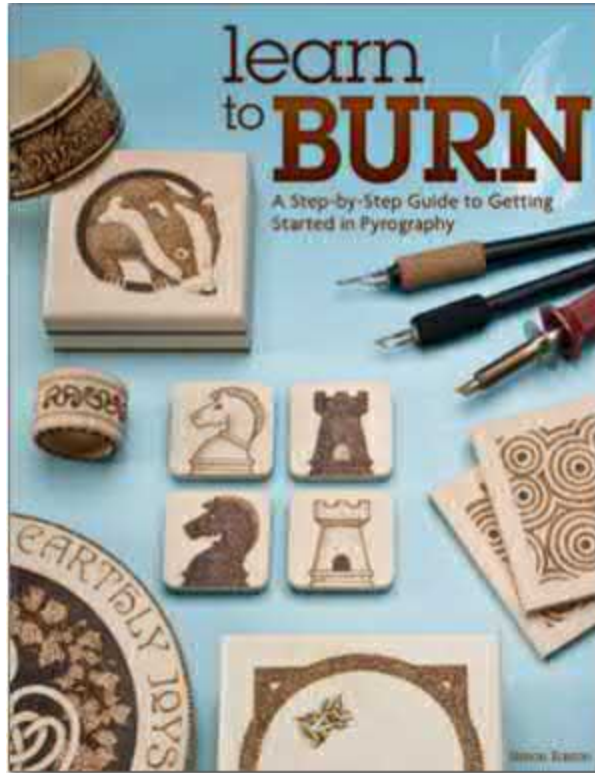
Variable-temperature tool: A woodburning system that incorporates a variable-setting thermostat with the woodburning pen. This allows control over the color value of a burned area by changing the thermostat setting. Variable-temperature tools use a bent wire tip that can be either permanently fixed to the pen or interchangeable. This type of tool is a more advanced alternative to the one-temperature tool; however, it is also more expensive.

Vellum: Tracing paper.

Writing tip: A variable-temperature tool tip used for writing.

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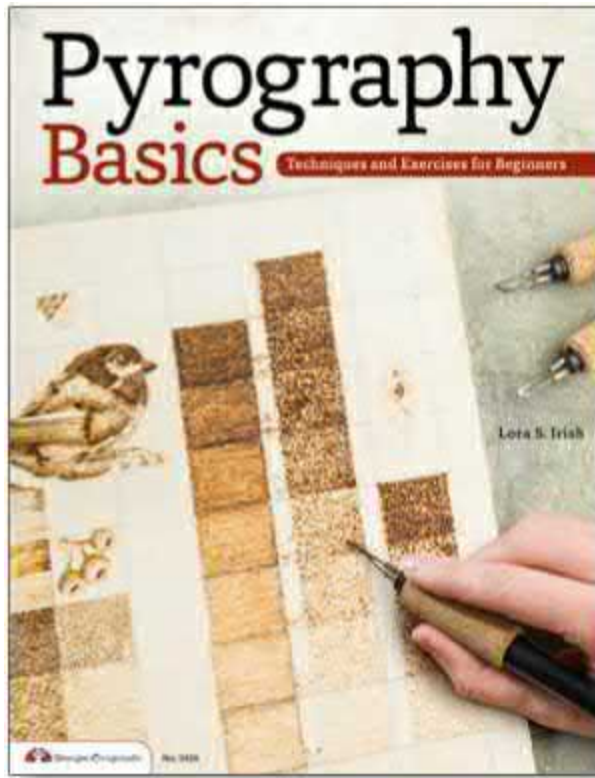
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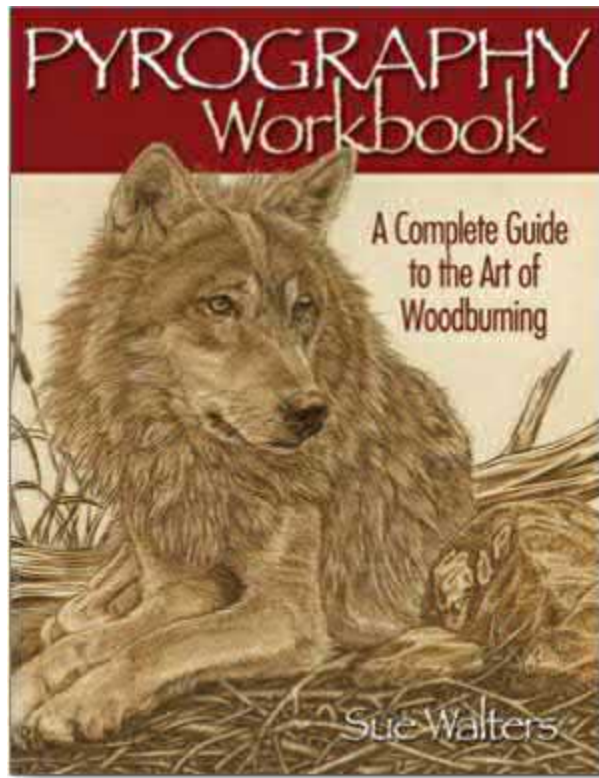
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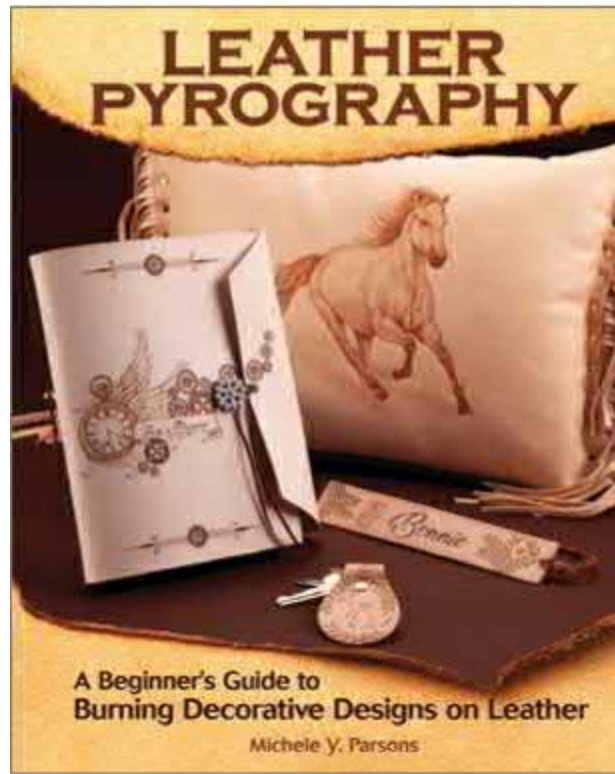
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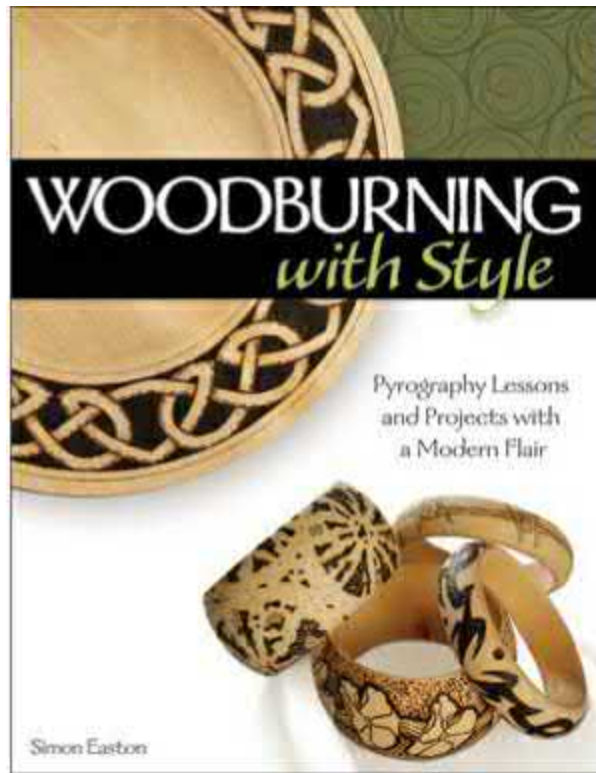
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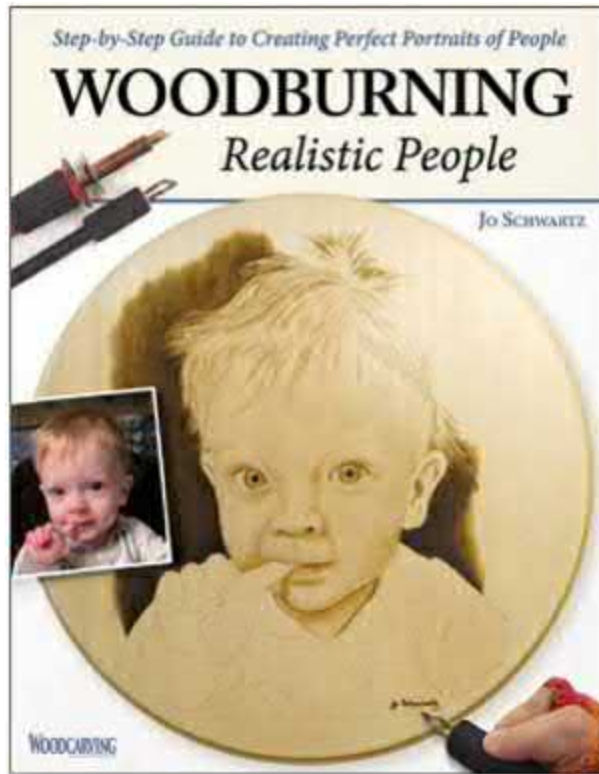
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