

Carving a House Sign

Learn letter-carving and gilding techniques with a traditional residential plaque

By Francis S. Lestingi



Producing a hand-carved, gold-leafed sign is tantamount to creating a methodical masterpiece. Every carved sign requires a set of procedures, which when followed, can be used to produce a sign ranging in size from a large 40-square-foot church sign to a modest house sign. The same methods are used to carve signs of any size.

For signs, I use only mahogany, and despite the beauty of its rich grain, I coat it with paint, because a clear finish cannot withstand the elements as well as sign-industry primers and top coats. I use five

custom-mixed background colors, which are dark and rich, to enhance the applied gold leaf.

There are two approaches to carving a sign: carve first, then paint and gild later; or paint first, carve, then paint again and gild later. The former sounds like the simplest approach, but the latter is actually easier. For this plaque, we will use both techniques on different segments of the plaque.

The sign's design is the most important phase of the production. If the design is mediocre or generic, the finished product can be no better.

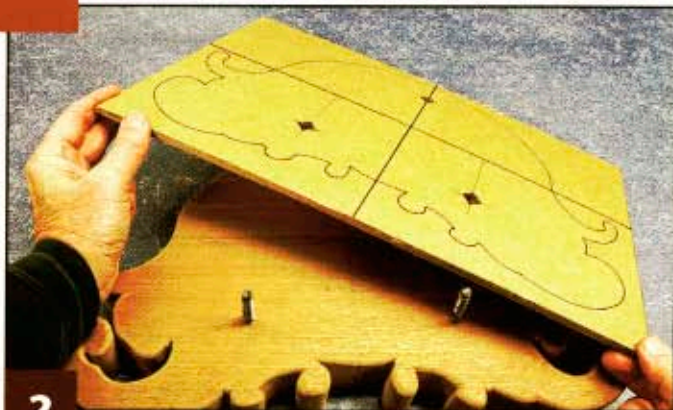
SIGN CARVING: CARVING THE PLAQUE



1

Cut the blank to shape. Transfer the pattern to the blank.

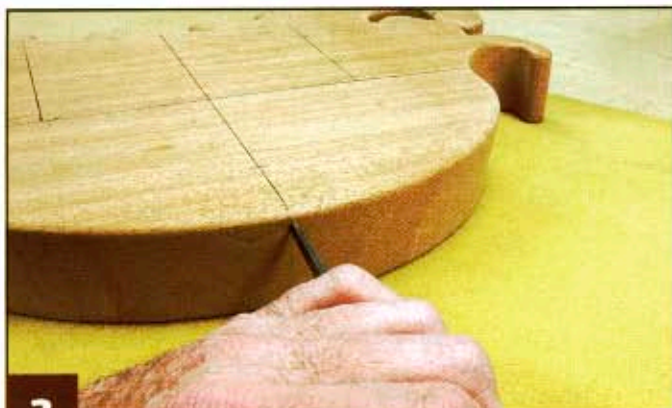
I use a laser print of the pattern and a heat pen transfer tool. You could also position carbon paper or graphite paper under a photocopy of the pattern and trace it onto the wood. Cut the design using a saber saw. Don't worry about the detailed areas yet; they will be refined with hand tools later.



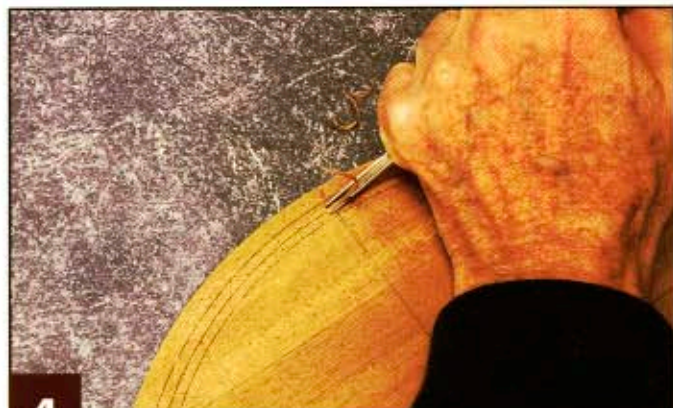
2

Add the hanger bolts. Position and pre-drill the holes for the hanger bolts.

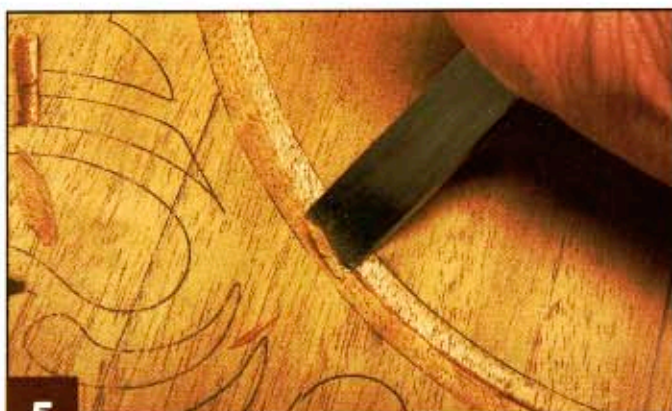
Twist the bolts in place with locking pliers. Use the bolts to produce a cardboard template to make positioning the holes for the bolts on the house easy. Hanger bolts can be found at most hardware stores. They are often used to secure toilets to wooden floors so they may be in the plumbing section.



3 **Make registration marks on the sides.** Remove the hanger bolts. Carve small nicks onto the sides to mark the centerlines before painting. This will save you the trouble of having to re-measure later. It is particularly important to do this with an oval shape because it is impossible to reestablish the major and minor axes of the oval after the carving is painted.



4 **Outline the cove.** The oval portion of the plaque has a cove that will be gilded later. Run a 3mm 90° V-tool down the center of the cove. This provides a shallow root line or centerline for the entire cove. To enhance the reflectivity of the gold leaf, it is very important to keep the depth of incised letters, numbers, lines, and scrolls as shallow as possible.



5 **Carve the oval.** The inner, or concave, side of the curve is carved with a 12mm #1 chisel. Start at the black line and end at the root line. On the outer or convex side of the oval, cuts are made with a 25mm #2 gouge, again starting at the black line and ending at the root line.



6 **Carve the scrolls.** Repeat steps 4 and 5 to carve the scrolls. Use the same V-tool to establish the root line. The gouge sizes and sweeps, and the chisel sizes, will depend on the tightness of the curves in the scrolls, but the general carving procedure is the same regardless of the shape of the curves.

SIGN CARVING: COATING THE PLAQUE

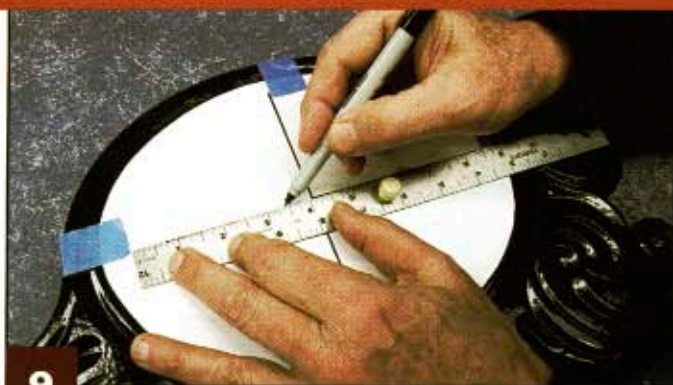


7 **Prime the sign.** Apply three coats of a sign-industry, water-based primer. Sand with 120-grit sandpaper between coats to ensure a smooth finish. Use two containers and tint one with a universal tint. Use the tinted primer for the second coat to ensure even coverage. Reinstall the hanger bolts to lift the panel up off the bench so you can paint both sides and the back side can dry.



8 **Apply the top coat.** Because a sign is typically exposed to the elements, it needs a high-quality top coat. I use a sign-industry, oil-based, high-gloss paint called 1-Shot. Each coat requires 24 hours to dry. Rough up the surface of the paint with synthetic steel wool between coats. Again, different colors are used to distinguish between coats.

SIGN CARVING: CARVING THE NUMBERS



9 **Mask off the main number area.** I apply a removable vinyl mask, called GerberMask I, with a plastic squeegee. The mask can be carved through and will simplify the gilding process. Use masking tape to transfer the registration marks to the mask and draw centerlines to help position the pattern.



10 **Attach a copy of the number pattern.** Photocopy or trace the numbers onto a piece of vellum tracing paper. Apply spray adhesive to the back of the vellum pattern and use the registration marks and centerlines to position the pattern in place. Use a plastic squeegee to press the pattern firmly in place.



11 **Establish the root lines on the numbers.** Sketch in the lines representing the lowest part of the number and carve along the lines with a V-tool. Use a small V-tool and make shallow cuts. Eventually, with practice, you will be able to carve the root lines without penciling them in first.



12 **Rough out the straight sections.** Make shallow cuts with a 25mm #2 gouge, working from the edge in toward the root line. If a cut ends below the root line, the carving is too deep. Try to ride the bevel, keeping the cuts shallow by lowering the angle of the tool immediately after it initially bites into the wood.



13 **Rough out the serifs.** The triangular segment characteristic of Roman numbers and letters is called the serif. Numbers and letters that do not have serifs are referred to as sans serif. Serif letters look traditional and sans serif letters look modern. Use a 12mm #2 gouge to rough out the serifs, using the same technique explained in step 12.



14 **Smooth out the numbers.** Use a 30mm straight chisel for the large areas and a 12mm straight chisel for the serifs. Keep the cuts shallow by riding the bevel. It is often easier to produce a deep cut than a shallow one. You may slightly undercut an adjacent surface to produce a crisp line at the intersection of two surfaces at the centerline of the number.

SIGN CARVING: CARVING THE NUMBERS



15

Carve the concave side of the curved numbers. Carve the root line. Then use a 12mm #2 gouge to carve down to the root line. Start $\frac{1}{4}$ " from the root line and follow the direction determined by the wood grain. Make additional passes, working $\frac{1}{2}$ " from the root line, etc., until you reach the border line.



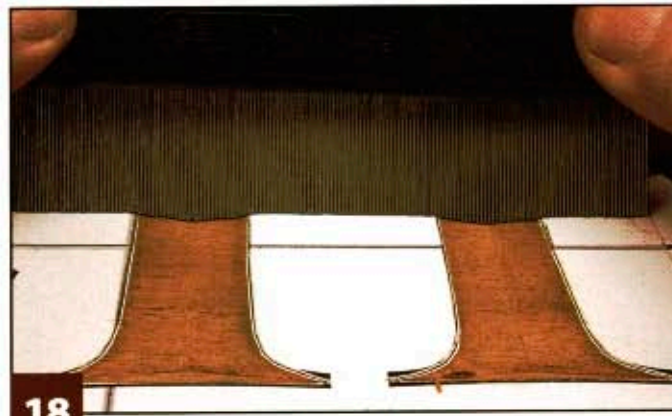
16

Carve the convex side of the curved numbers. Short cuts are made around the curve, following the appropriate direction determined by the wood grain. Work in stages as you did in step 15. Smooth the surface using gouges for the curved areas and chisels for the flat areas. Carve the serifs with the same tool.



17

Smooth the sides of the curved segments. Match the gouge's sweep to the curve. In this case, I use a 20mm #5 gouge. The carving starts near the root line and proceeds to the border where the final smoothing cuts are made. Because most numbers and letters do not maintain a constant curvature, change gouge sweeps to match the curves. The curvature in the number "2" flattens out near the serif so switch to a 25mm #2 gouge.



18

Check the depth of your letters. You can see the numbers are carved very shallow. The depth of the root line is measured to be slightly more than $\frac{1}{8}$ ". After a number has been gilded, light will reflect off its shallow incised surfaces far more readily than it will from the surfaces of deeply carved letters. Besides reflecting more light, shallow numbers require less gold than deep numbers.

MATERIALS:

- High-quality vellum tracing paper
- Carbon paper or graphite transfer paper (optional)
- $\frac{3}{4}$ " x 12" x 18" mahogany panel
- 3 each 3"-long hanger bolts
- 14" x 20" piece of cardboard
- Sandpaper, 120-grit
- Synthetic steel wool
- Primer (Jay Cooke's Primer)
- High-gloss oil-based paint (1-Shot Lettering Enamel)
- Removable vinyl (GerberMask I)
- Spray Adhesive

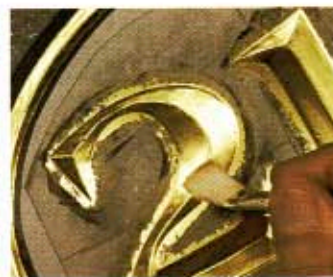
materials & tools

TOOLS:

- Heat transfer tool (optional)
- Saber saw with scroll blade
- Locking pliers
- 1" red sable brush
- Plastic squeegee
- 3mm 90° V-tool
- #1 chisels, 12mm and 30mm
- 25mm #2 gouge
- 20mm #5 gouge

Gilding

The carved sign is now ready for the gold leafing or gilding process. This technique will be covered in the Holiday 2008 issue of *Woodcarving Illustrated*.



About the Author

Francis S. Lestingi is a sign artist, calligrapher, and professor emeritus in physics at the State University College of New York at Buffalo. Francis runs Signs of Gold, Inc., and has published 13 articles on sign carving, which are available at his Website www.signsofgold.com.

