



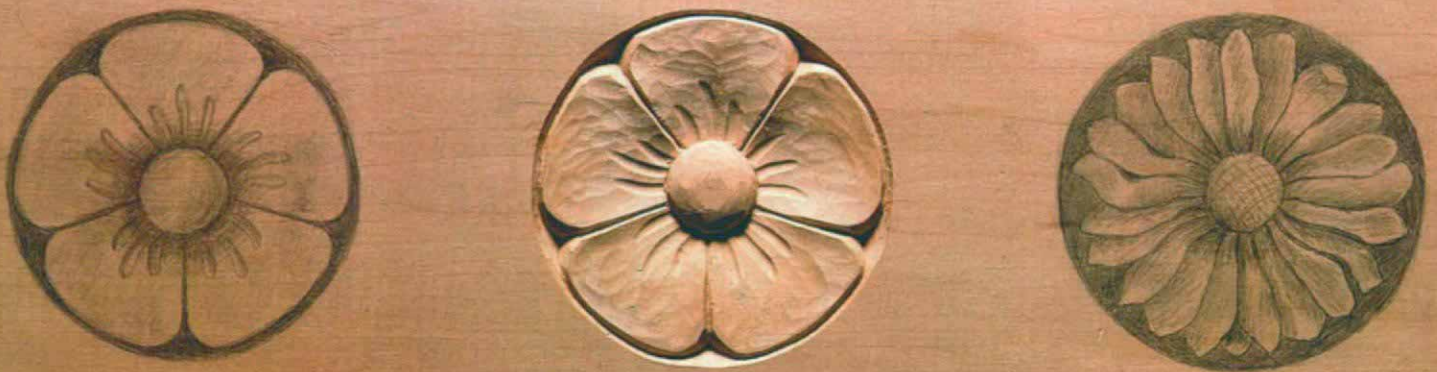
Master carver and teacher Nora Hall (above) starts her students off with a kit of only about eight tools, which is all they need to outline and shape most relief carvings. The flowers in the photos below, which were drawn and carved by Hall, are ideal

first projects for teaching the principles of tool use and the manipulation of light and shadow to imitate life. Hall's 5-ft.-high carving in the inset photo shows how simple motifs, such as these flowers, can be worked together into intricate classical arrangements.

The Basics of Classical Relief Carving

A first lesson from a second-generation woodcarver

by Nora Hall



Anyone can learn how to carve wood. All it takes is patience, seven or eight tools and a lot of practice. I work with hundreds of students from across the country each year, and I am continually fascinated by how quickly they master the skill. Furnituremakers are especially eager to learn because they know that carving gives them an important design tool: a way to manipulate light and shadow. That's really what decorative carving is all about—controlling light and shadow to create realistic forms.

The method I teach to beginners is the old-European way of relief carving that I learned from my father in Holland. I began carving during World War II, when I was 18. The boys were hiding from the Germans, and since my father needed help in his carving studio, I went to work for him. I'm thankful about the way things worked out; otherwise, I might not have had the patience to master the traditional methods of carving motifs like flowers, leaves and scrolls.

Woodcarving can be as simple or as complex as you want, but in either case, the underlying principles are the same. First and foremost, your carving should appear lifelike and possess a sense of movement, whether you're carving a single flower, as described below, or a full-size human torso. You must observe your subject carefully, and use your imagination to come up with ways to make things appear real.

Take an oak leaf, for example. Right off the tree it's a pretty shape, but it becomes more attractive and complex as it dries, twists and wrinkles. The same idea applies to carving. You don't want any perfectly flat or boring surfaces. Something carved exactly round will look unnatural. You never want any part of your work to appear heavy and wooden, so you may want to undercut the edges of some parts slightly, to create a dramatic shadow or a feeling of lightness. Avoiding that heavy feeling might even require you to distort the scale of an object; carving something larger or smaller than life may suggest life and movement more than an exact copy. Keep these basics in mind as you begin to sketch and shape your own carvings.

A basic tool kit for carvers

Your enthusiasm for woodcarving shouldn't be dulled by fears that you can't start without the hundreds of gouges and chisels pictured in catalogs. With my system, you'll need only eight tools to outline and shape the convex and concave surfaces on any relief carving. I always stress that these are not beginners' tools; they are starter tools, and you'll use them as long as you carve.

Carving tools are generally classified by their sweep, or the shape of the cutting edge—flat, gently curved, deeply fluted or V-shaped—and by the width of the edge. As you might expect, narrow, flat tools are designed to remove less wood with each stroke than wider, deeply fluted tools. The sweep is specified by a num-

ber, and the width is listed in either inches or millimeters.

The starter set I specify for my students includes two #3 gouges, 8mm and 12mm; two #5 gouges, 6mm and 10mm; two #7 gouges, 8mm and 12mm; one #11, 10mm veiner (deep-fluted) gouge; and a #12, 60° V-parting tool. You'll also need sharpening stones and slips and some type of leather or abrasive strop for honing the tools. Sharp cutting edges are essential (see the sidebar on p. 73 for my double-bevel sharpening method). For more on sharpening carving tools, see *FWW* #66, pp. 48-51. Finally, you'll need some type of bench that you can clamp the work to as you carve.

Learning to carve with the grain

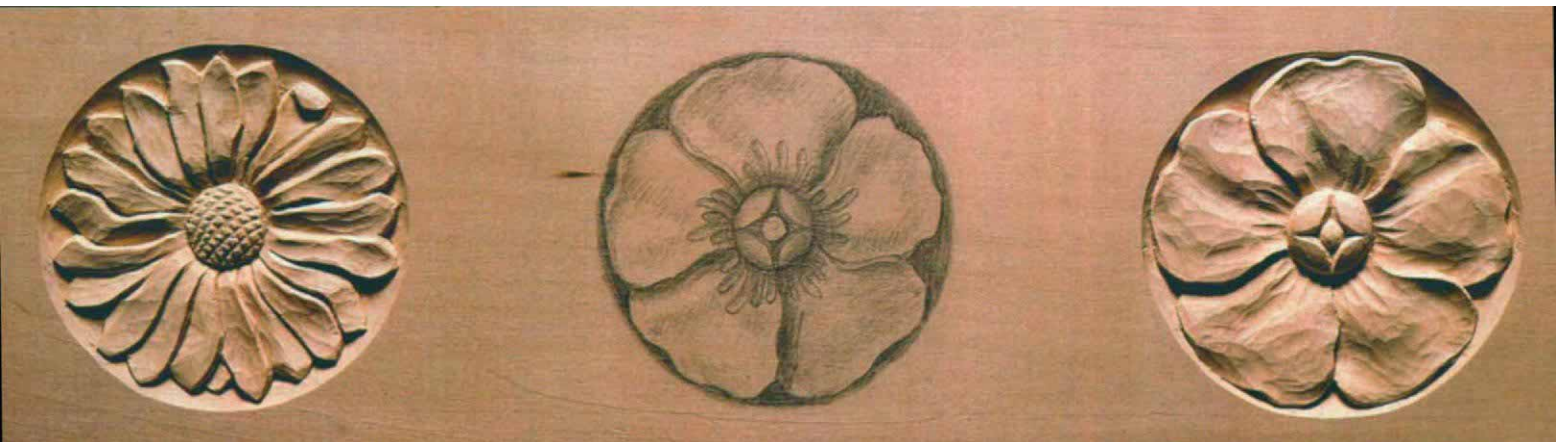
A simple flower, like one of those drawn and carved on the boards in the photos on the bottom of these two pages, makes a great practice piece: It requires a variety of cuts and uses all of the tools in the starter set described above. Also, it's a good project for learning how to hold tools properly. For maximum control and a smooth cut when using a chisel, you must have your wrist and forearm on the board, as shown in the top photo below. You may have to raise the level of your benchtop before you can do this comfortably.

It's also important to learn to work ambidextrously. Carvers must constantly change the direction of cut to avoid tearing the grain. It's not practical to keep moving to the other side of the bench or to reclamp your work just so you can hold the chisel with the same hand. Initially, some students sit on the bench and attempt various acrobatic maneuvers to cut with either their right or left hand. But after I insist they use both hands, it takes them only about two hours to learn. It really isn't that hard.

Basswood is good for beginners because it's soft and has a fine grain. But even with such an easy-to-work wood, you should carve



The first step in carving a flower is to outline the shape with a V-shaped parting tool. Carving the outline, as opposed to scoring it with vertical cuts, removes wood and gives you space to work.





Hall uses a V-tool to outline the center of the flower. It's important to just tap the chisel lightly with a hand or mallet at this stage, to avoid tearout and to maintain control of the cut.



A shallow gouge is used to shape the petals and round over the center of the flower. For maximum control, the carving tool should be held low on the handle and blade, as shown.

with the grain as much as possible. Don't get uptight about this; cutting in the right direction on the first try isn't a matter of life or death. Learning to distinguish between smooth cuts and rough cuts, and then adjusting to the changing grain, is the key to success. The whole process will be a lot clearer once you put tool to wood.

To start, clamp the basswood to your bench so the long grain runs from right to left. Begin carving by making some practice cuts with the V-tool. This tool is essential for outlining any carving before you begin shaping details. You may have seen other carvers outline a carving with stop cuts, which involves driving a tool straight down into the wood. This operation wedges the wood fibers apart, rather than slicing them, and leaves weak areas that are likely to chip out later. Outlining with the V-tool actually removes wood and gives you space to work. Once the shape is outlined, you can form deep perpendicular walls by making converging cuts, one straight down and then one at an angle to the first cut.

To practice with the V-tool, make a series of small, shallow cuts. For the first 15 minutes, cut diagonally, working from right to left. Then switch and cut from left to right, nearly perpendicularly across the first series of lines, creating a pattern that resembles the checkering on a gunstock. Hold the V-tool close to the cutting edge (see the top photo on the previous page). Most people are reluctant to hold onto the metal below the handle and therefore hold the tool too high. Keep your arm and wrist on the work, and tap the chisel with a mallet. To save wear and tear on your hands and muscles when roughing out, use a mallet, but don't swing so hard that you lose control. When working with a mallet, the more you push your wrist down on the board, the better the cut and the greater your control. Another way to increase control is to take light cuts. Most beginners mistakenly cut straight down into the wood; they look as if they are going right through, the workbench.

Once you've covered a small area with a cross-hatch pattern, look carefully at the lines you've cut. You'll notice that the wall on one side of the V appears smooth, and the wall on the other side will be rougher. This shows the relationship between direction of cut and wood grain. Think of wood grain as the straw bristles on a worn broom. If you rub the bristles on the bottom of the broom in the direction the broom is used for sweeping, the straw lays flat and feels smooth; if you rub in the other direction, the straw resists and the feeling is rougher. Cutting with the grain is smoother because you're pushing in the direction that causes the fibers to

lay down as they do naturally; on the other side of the cut, you're forcing the fibers apart, opening the grain. These sections of open grain are difficult to finish and prone to break off as you carve.

Carving flowers as a first lesson

Now that you understand the basics about grain direction, you're ready to really start carving. But first you need a sketch. It doesn't have to be very elaborate, especially for practice pieces. In my classes, everyone usually has a coffee cup with them in the morning, and that becomes the pattern for the first flower. Trace the bottom of the cup to form a circle, and then sketch a smaller circle free-hand in the center of the first one. Next, draw in petals and round their ends (see the flower at the far left on the bottom of p. 70).

Begin work by outlining the flower with the V-tool, as shown in the top photo on the previous page. Again, keep your forearm and wrist on the wood, and make light strokes to determine grain direction. At first, don't worry about making a perfect line. That way you can change your mind about the shape as you study the grain. You want to cut in the direction that will leave the inside of the outline smooth and the outside rough. If the internal area is rough, it will be prone to break as you shape the various components of the flower.

Continue making light cuts as you outline the center circle and petals. When you outline the petals, always cut toward the center. To begin shaping the areas within the V-tool outline cuts, use your #7 gouges. If you need to deepen or clean up any of the outlines, switch back to the V-tool, as shown in the left photo above, rather than making stop cuts with the gouge.

As you carve with your gouges, once again hold the handle down low, so that your hand is partially on the blade, for maximum control, as shown in the above photo at right. Experiment with the #7, #5 and #3 gouges, but practice your cuts on scrap before touching the real carving. This practice time will let you discover what cuts work best with each gouge. If you have honed an inside bevel on your tools, as described in the sidebar, also experiment with carving with the main bevel up, as well as down.

At this stage, your flower carving still looks rough, but you can refine it by rounding over and smoothing the flower's center before working any more on the petals. The petals can be shaped in a variety of ways. Try hollowing them slightly with a #5 or #7 gouge, as shown in the above photo at right. As you smooth out the shape, use



To form the notch between the ends of the petals, Hall makes two converging cuts with a gouge and then pops out the chip between the petals with a third angled cut.

hand pressure rather than a mallet to move the tool, and be careful not to chip out the edges of the petals. All the petals are shaped in the same way. Again, rely on your V-tool for refining outlines.

Shape the notches between the ends of the petals with a #3 gouge. You need to make three cuts in from different angles, so you should make a couple of practice cuts first. Continue practicing the moves until you master the angle needed to pop out the chip. The two cuts going into the corner, shown in the photo above, must be deeper at the V of the notch between the petals. The third cut frees the waste because this cut is angled in toward the other two. This method for coming in from three different angles is a very important maneuver; you'll use it for years to come.

Finally, smooth the surfaces with your gouges and the outlines with your V-tool to eliminate any rough or torn areas. If you work carefully, you shouldn't need to sand much at all, except perhaps to freshen areas that appear soiled from being handled. Don't rely too much on sandpaper; it will destroy the hand-carved look and

feel of your work. Sharp edges and crisp corners are the hallmark of high-quality carving.

Teaching yourself

Continue to practice by carving the other flower designs in the photos on the bottom of pp. 70-71. When you think you've learned all you can from carving flowers, you might try letters, grapes, leaves or other simple shapes. Then you can put those shapes together into unique arrangements. Once you begin to master the basics, you'll discover thousands of subjects and millions of design variations to explore. Check your library for books with carving illustrations, such as *The Manual of Traditional Wood Carving* by Paul N. Hasluck (Dover Publications, 31 E. 2nd St., Mineola, N.Y. 11501; 1977). Most of my students find that once they get started, they can improve their skills on their own; if they are very observant and practice a lot, they don't need me or any other teacher for long.

Here are some additional hints to help you along the way. I carve all my letters freehand, but you can find books on the subject at local libraries and art-supply stores. Just remember to relate tool size to the size of the shapes in your design. Be conscious of grain direction, and don't hesitate to make practice cuts until you get a sense of the movements needed to cut a graceful letter.

Leaves are carved just like a flower: outline the shape, rough-carve the features, refine the details. Again, you want your work to reflect life, so most of your cuts should either originate from the center or go toward it. Grapes are another good practice project. When drawing out the pattern, you can obtain a more realistic look by determining how the grapes will be hanging; the bottom of each grape should be somewhat fuller than the top.

There's no end to what you can do. As you proceed to more elaborate reliefs, you might want to experiment by modeling the piece in clay before working in wood. I definitely recommend clay modeling when you are ready to try carving a human face. A face is one of the hardest things to carve. But, like any other carving, all it takes is practice, practice, practice and a little imagination. □

Nora Hall has been carving wood professionally since 1941. She carves and teaches carving at her studio in Cloverdale, Ore., Anderson Ranch in Colorado and Peters Valley in New Jersey.

Beveling both sides of a carving tool's edge



For crisp, smooth cuts, carvers prefer tools that have long, shallow bevels between 22° and 30°. Unfortunately, the cutting edge on long-beveled gouges is quite weak and prone to chipping. To avoid this problem, European carvers often form a second bevel on a gouge's inside curve (see the photo at left). Beveling the inside edge of the tool makes a slightly thicker cutting edge and extends the time between regrinding. I've found that even when a double-beveled tool begins to

dull, it will cut better than one with a single bevel because the wood being removed seems to slide more smoothly over the edge.

The inside bevel that I use is about 7°, measured off the gouge's inside surface. After sharpening the primary bevel and honing it razor sharp, I then make a series of strokes on the inside, concave face of the gouge. To do this, I use either a round, hard Arkansas stone or the round edge of a slip stone.

I also slightly round the corners of most of my gouges

before sharpening them. The rounded corners make it easier to excavate deep areas when carving in the conventional manner with the primary bevel down. In addition, the combination of rounded corners and the inside bevel lets me carve with the inside bevel down, for more versatility in rounding over raised portions of a carving. Taking the corners back also means that I can cut with the tool handle held higher than I could with a tool straight from the factory. —N.H.