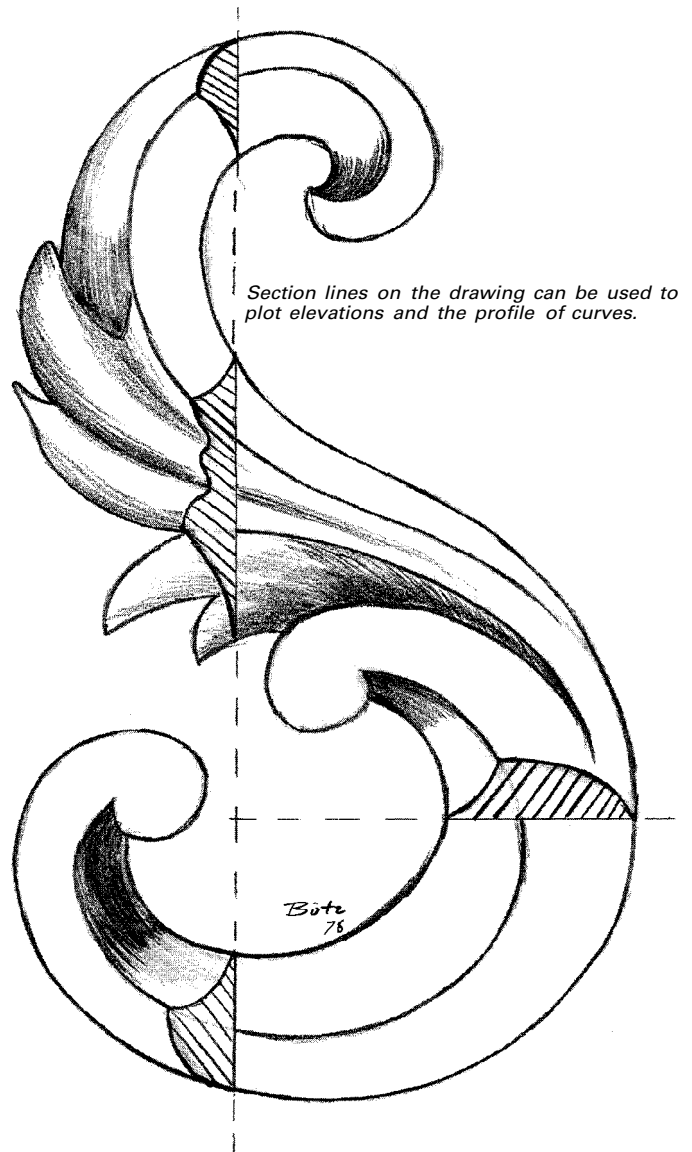


Relief Carving

Traditional methods work best

by Rick Butz

Relief carving has been around for a very long time. Exactly how long nobody is really certain, although archeologists agree that it predates written history. However, it was not until the 17th and 18th centuries that relief carving reached its peak of technical skill in the West. During this period, wood-carvers created works of such beauty and grace that few can equal today. And yet, despite this technical brilliance, it was only a few generations until the age of machine industry brought this period to an end. Looking back, we can see that the effect of changing priorities was a decline in certain types



of knowledge. Skills and methods that were once common knowledge have become, at best, uncommon.

The result is that today many woodworkers might wish to incorporate carving into a furniture design, but they shy away on grounds that it would involve far too much time to be practical. This should not be the case. If a relief carving is approached with a sense of purpose and organization, all the work can be done by hand with surprising speed and efficiency—and considerable pleasure too. Whether the design is contemporary or traditional, a tasteful carving can add richness and depth to any woodworking project.

Loosely defined, relief carving is a method of creating a raised design that appears to stand free of the background. The distance that separates the raised portion from the background determines whether the carving is high relief or shallow relief. In either case, the basic carving steps are always the same. First, the background is carved away and smoothed. This leaves a raised design and a level background. Second, the design is shaped and smoothed. It is important to complete all background carving before doing any work on the free-standing parts of the design. This is not an arbitrary rule, but rather a method that greatly simplifies the work.

In addition, the carving must be well planned out in advance. Not only should the design be clear on paper, but each step of the carving should be carefully thought out and systematically completed before the next is begun. While this may sound overly technical and confining, the creative worker will find instead that such planning allows greater flexibility in shaping the wood. By solving basic problems first, one may concentrate more freely upon the work at hand. Relief carving, if approached in an orderly fashion, will continue to demonstrate that in many cases, handwork is still one of the most efficient ways to shape wood.



Before any carving can begin, it is essential that tools be razor sharp, able to cut cleanly and smoothly. A properly sharpened gouge will leave the wood with smooth polished facets. Correct sharpening is probably the greatest mystery of woodcarving, but it is often an unnecessary stumbling block. In addition to the variety of European and Oriental sharpening methods, we have several generations of Yankee ingenuity to contend with. For example, I know a very good carver who uses half a dozen stones to hone his tools. Another, equally good, sharpens only with sandpaper and spray lubricants. So who is to say what is best?

The reasonable solution is to follow whatever method works best for you without abusing the tools, and the best teacher is experience. One effective method uses only a flat stone of medium grit and a revolving cloth wheel. The gouge is sharpened with a rocking motion on the stone, using plenty of oil, until an even wire burr can be felt along the edge.

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Relief carving tools (from left): V-tool for outlining, three gouges for general shaping, long bent grounder for backgrounds, spoon gouge, and flat or firmer gouge. The block is butternut, held to the bench by a long screw from underneath.

Next, the bevel is polished on the cloth wheel until the metal burr wears off. This will leave a razor edge. A small amount of buffing compound applied to the cloth will speed the process. A razor edge can be achieved with only a little practice, and the resulting polishing of the cutting bevel to a mirror finish noticeably reduces the friction of the tool as it cuts.

While sharpening is essential, the edge is only a small part of a woodcarving gouge, and many neglect caring for the rest of the tool. A high-quality gouge that fits your hand actually does produce a better carving. I'm not sure whether this is purely a psychological reaction, or if it is because you have better control of a tool that feels comfortable.

Even the best of woodcarving gouges should be carefully checked over for anything that does not feel quite right. It is not unusual for a new tool to have sawdust and splinters embedded in the varnish of the handle. This should be sanded smooth. Also check the metal surfaces of the tool for any rough edges. I am not surprised to find wicked burrs of metal in the brass ferrule on a new handle. These should be filed and sanded smooth, or else some particularly nasty injuries may result.

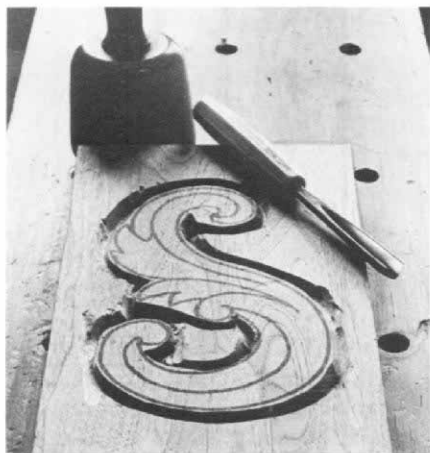
Many old-timers took the finish right off the handle to prevent blisters and calluses, much on the same principle as stripping an ax handle. The exposed wood was then soaked in oil and wiped clean. The oil not only sealed the wood, but left a porous finish. It also hardened the end grain of the handle as heat was generated by the striking mallet, which helped prevent fraying and splitting.

After the wood has been selected and the design accurately marked out, work can begin. Before cutting into the wood, it is helpful to pause for a few minutes and imagine just how the completed carving will appear. With practice this visualizing will not only help solve problems well in advance, but will also create the feeling that your hands are shaping the wood almost without conscious effort. By fixing the image in your mind, your hands will be guided by subconscious mental processes. This is not a new principle, but rather a means of helping to develop a "woodcarver's instinct." This feeling develops naturally after years of experience. However, a little practice will speed the process considerably.

The design I chose for the photo series that begins on the next page is a traditional variant taken from an old family table. It offers excellent practice in all areas of carving.

1 Outlining The first step in relief carving is to cut around the design with a V-tool. Such outlining serves as a starting place for isolating the raised portion of the design from the background. The cut should be made $\frac{1}{4}$ in. to $\frac{1}{2}$ in. out from the edge of the design and must not get too close to any delicate details. These can be shaped later, when there is less chance of damage.

A mallet is often helpful in making the outline cuts, although care must be taken to



Outline the design with a V-tool.

2 The background Once the outline of the design has been clearly defined, work can begin on taking down the background waste areas. When this task is approached in an orderly manner, the grounding out can be efficiently completed strictly by hand. While this work can also be done with an electric router, a good professional woodcarver in times past could cut and clear



Remove background waste with closely spaced vertical cuts.

avoid splinters running into the design. The best way to prevent unwanted splintering is to carve according to the flow of the wood grain. If your tools are sharp and the wood still splinters and tears, try approaching the cut from a different direction.

With a gouge of medium sweep, a series of cuts is made from the waste area toward and meeting the outline cut. This widening of the outline allows enough clearance to trim up the edges of the design. Make the walls of the design vertical by taking a small flat firmer or a gouge whose sweep is similar to the curvature of the design and cutting straight down. This procedure is referred to as "setting-in."

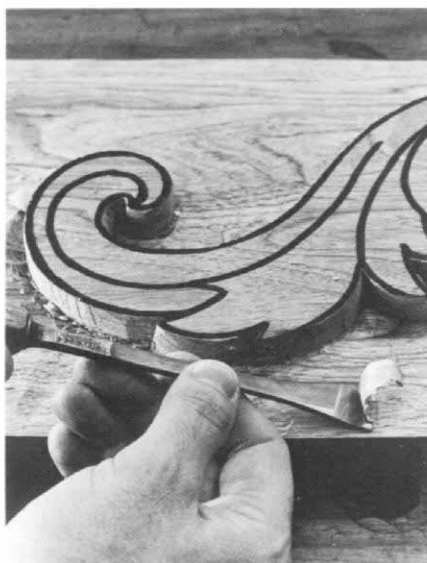
By continually enlarging the outline cut



Trim the edges vertical.

a background in less time than most of us could even set up a power tool.

The best technique for cutting out a background, especially in softer woods, requires a firmer and a mallet, although a shallow #3 or #5 gouge can be used. With these tools a series of parallel cuts is made, one in back of the other. These are spaced in rows about $\frac{1}{4}$ in. apart and preferably across the grain. By lightly driving the gouge into the waste wood just behind the previous line of cuts, the waste will chip away. Roughing out should be done layer by layer if the background depth is to be very great. But take care not to drive the gouge deeper



A #5 gouge levels and smooths rough cuts.

and smoothing down the walls of the design, the background can be sunk as deeply as wanted. A mallet of comfortable weight is helpful in these steps to tap the gouge lightly. However, take care not to drive the point too deeply, or a broken tool can result, especially if the wood is dense. Remember too that up to this point, the raised portion of the design remains untouched. The object of outlining and setting-in is to cut away all wood that will not be included in the raised part of the design.



The design is outlined and set in.

than necessary, or extra smoothing work will be required.

When the background has been completely roughed out, it is worked smooth using a gouge of fairly shallow sweep. Take care to arrange the smoothing cuts in an esthetically pleasing manner, as they form the finished background. Leveling and smoothing are sometimes easier with a bent gouge called a grounder. It is especially useful where lateral clearance is restricted, although in many cases a regular gouge will work quite well.

However, where working room is really cramped, such as inside a sharp curve, a



Spoon bent gouge works in tight places.

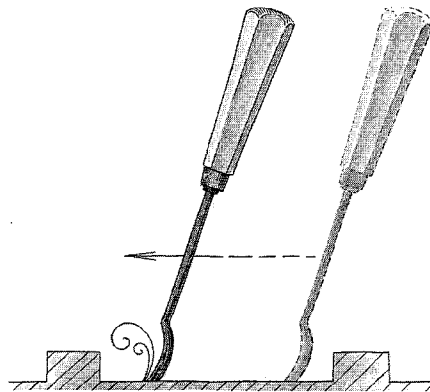
spoon bent gouge can be indispensable. These tools are available in a great assortment of sweeps and widths, yet they are probably the least used tool in many woodcarving sets. Part of the reason for this is the natural tendency of the spoon shape to be used in a scooping motion, which greatly restricts its usefulness.

Instead, the spoon bent gouge should be positioned at the angle where it just begins to cut. Then, carefully but firmly, it should be drawn across the wood without changing the angle. In effect, this produces the same cut as a long gouge. However, instead of beginning the cut at 15° to 30° to the work, the tool can be held at almost 90° to the work. This allows carving background areas inside deep recesses.

3 Modeling With the previous steps completed, the raised portion of the carving will stand free and clear from a smooth, level background. The design can now be modeled, first by roughly shaping the contours and then by smoothing the shapes with clean finishing cuts.

The roughing out is best done by carefully making cuts that round off sharp angles from the top downwards. For rough-shaping the outer portions of a curve, use a flat firmer or a gouge of slight sweep. For the inside curves, use a gouge of greater curvature or quicker sweep. This will help prevent unwanted splintering. The lines that form valleys between the leaves can be cut to depth with a V-tool and then rounded smooth.

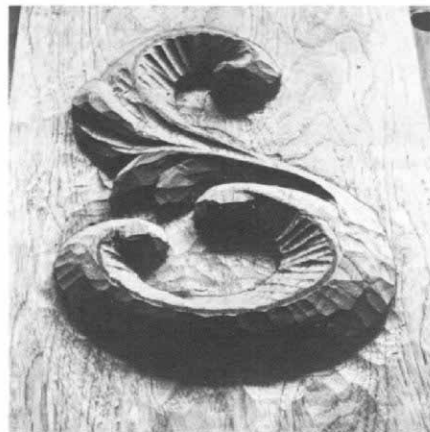
These roughly shaped surfaces are then finished off with long smooth "sweep" cuts. These final cuts distinguished the professional works of old. This technique is used for finishing both the inside and the outside surfaces of the curves. Begin by steadying the blade of the tool with your left hand. The palm rests firmly upon the surface of the carving. By pushing the tool with the right hand and pivoting on the palm of the left, the edge of the gouge can be made to follow a very well-controlled curve. By experimenting with the point where the left hand pivots, a great variety of arcs can be achieved to follow the curves of most carvings. This requires a bit of prac-



Push the bent gouge with both hands, without changing its angle of attack.

tice, and like all carving techniques should be done with either hand. It is a very useful and satisfying technique.

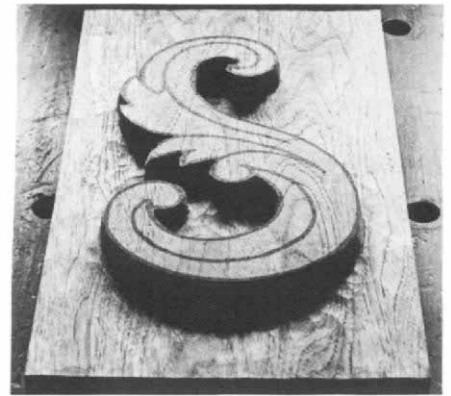
For inside curves with concave surfaces, a bent or spoon-shaped gouge of considerable sweep is useful. On the other hand, a flat straight gouge can be used for convex, outer curves. Be careful to note changes in the direction of the grain so that the cuts will not be fuzzy, but smooth and polished. This will eliminate the need for smoothing with sandpaper, which should be avoided on any fine woodcarving. Sandpaper destroys the



The waste is gone, and finishing cuts can now be made.



Long sweep cuts leave a smooth finish. A bent gouge or spoon gouge may be best for inside curves. The right hand powers the tool, while the edge of the left hand rests firmly on the work.



The background is now completed, and modeling can begin.

tool marks that bear witness to serious handwork, and in an age of some very good plastic imitations, this is a serious consideration. If esthetic considerations require an absolutely smooth surface, then that is a different matter. But never substitute sandpaper for good technique and discipline.

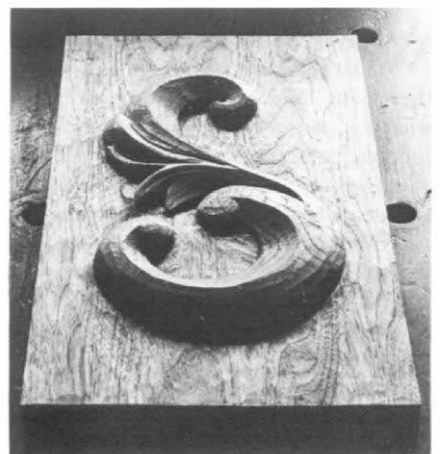
As a final note, in doing any woodcarving, try not to lose your sensitivity to the nature of the wood. If you find yourself fighting the carving, if your tools produce ragged, splintered chips instead of smooth graceful shavings, then something is wrong. Make sure your tools are absolutely sharp, the wood is correct, and that you are working in the proper direction—with the flow of the grain. □



A firmer smooths the outside curves, again with long sweeping cuts.



A quick gouge rough-shapes the wood on the inside curves.



The finished carving.