

Chip Carving

Simple cuts form complex patterns

by Rick Butz

Chip carving is one of the oldest forms of decorative woodcarving and also one of the simplest. A straight-edged knife sharpened to a fine point is all you really need, though a skew-ground knife and a knife with an offset blade are useful. Complicated geometric patterns are formed by arranging dozens of small triangular incisions.

The simplicity of technique and the personal satisfaction chip carving offers caused it to flourish well over 1,000 years ago. It seems to have developed simultaneously among peasant communities in many lands, including Scandinavia, Germany, Switzerland and Russia. As the centuries passed, many of the patterns and designs were freely exchanged, and in time it became impossible to identify which motif was developed by which nationality.

In its heyday, chip carving was used primarily to decorate household items. Many elaborately decorated objects were carved during the long winter and later given away as gifts. However, as the slow pace of country life was hastened by the pressures of industrialization, fewer evening hours were spent carving at the hearth. Eventually, chip carving faded into obscurity and was continued only in remote parts of Switzerland and northern Europe. In America, the tradition was carried on by the Pennsylvania Dutch.

Traditional chip carving was also used as a training device for woodworking apprentices—it remains a good test of self-discipline and sharp tools. Mistakes and overcuts, once committed, are not easily corrected or concealed.

To start chip carving, first make sure your tools are razor-sharp, because the final appearance of the work is judged by neat cuts and crisp, clean lines. In addition, a sharp knife will be less likely to slip while you are carving, minimizing injuries and the unnecessary frustration of spoiled work.

Test the sharpness of your knife by lightly, carefully scraping the edge across your thumbnail. If you can feel the edge grip and hold, then the blade is razor-sharp. If the edge slides and skips, it is dull. If the edge is dull, use a medium-fine Washita or fine India stone and a leather strop for sharpening. Lubricate the stone well with a lightweight oil to prevent clogging, and hold the blade at a fairly low angle. Sharpen one side at a time, using a circular motion until a fine wire burr forms on the cutting edge, indicating that the metal has been brought to as fine an edge as that particular stone will allow. This wire edge is difficult to see, and you can best check for it by lightly dragging your fingertip across the blade away from the cutting edge. Check both sides. The burr edge will feel rough, as though it is catching on the ridges of your fingerprint. When you can feel the wire edge along the entire edge, the blade is ready for the strop.

A strop is simply a strip of stout leather securely fastened to a length of wood. You can make one by gluing or tacking a piece of old leather belt face down to a wooden base. Stroke alternate sides of the knife blade slowly and evenly along the

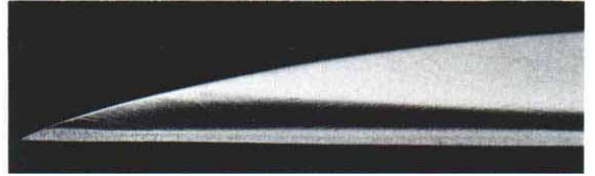
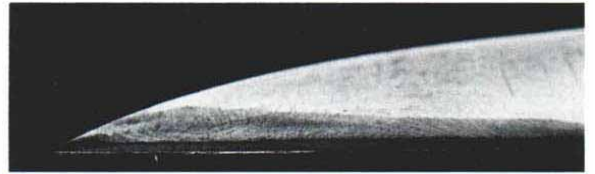
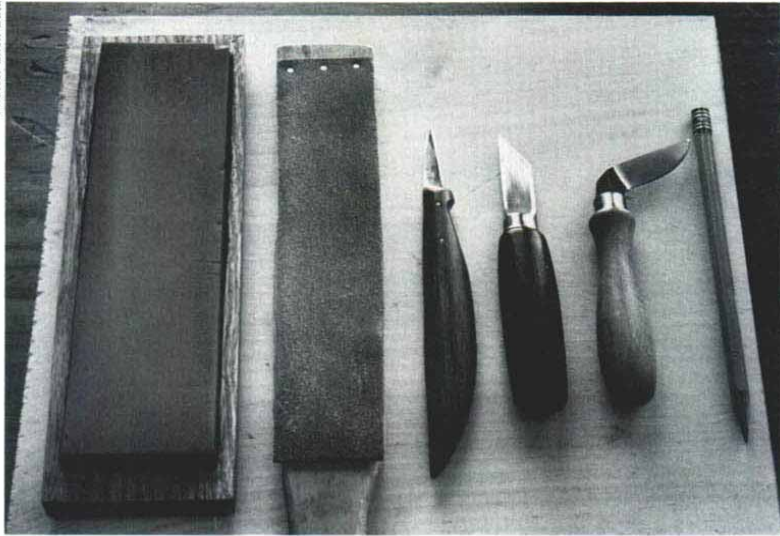
leather in the direction away from the cutting edge. Otherwise, the knife will cut into the leather and dull the edge. Several minutes of stropping should wear off the burr, leaving a razor-sharp edge. A little metal-buffing compound rubbed into the leather speeds this process considerably. Woodcarvers often have several strops coated with different grits of rubbing compound ranging from coarse to fine, with the leather left plain for the final touches to maintain a fine edge during carving. It's a good idea to strop the blade 20 or 30 strokes on each side after every half-hour or so of carving.

After sharpening, mark out your pattern. There are several ways to transfer a pattern. One way is to trace a paper pattern onto your wood with carbon paper. Or, you could glue the pattern directly to the wood with a little rubber cement. After carving the design, rub or sand off the remaining bits of paper. Another way is to draw your pattern directly onto the wood using a small straightedge and a compass fitted with a sharp pencil lead. A little knowledge of geometry helps. Bear in mind that many of the pencil lines will remain after the carving is completed because they mark out or cross high points in the design where little or no wood will be removed. Therefore, keep marks light to make cleanup easier. Also, when sanding off guidelines, wrap the paper around a flat block of scrap wood to prevent rounding off the crisp edges of the chips—easy to do if pressure is applied only with the fingers. Too much sanding can easily ruin a chip carving, and it is best to work with a fine grade of paper as lightly and as sparingly as possible.

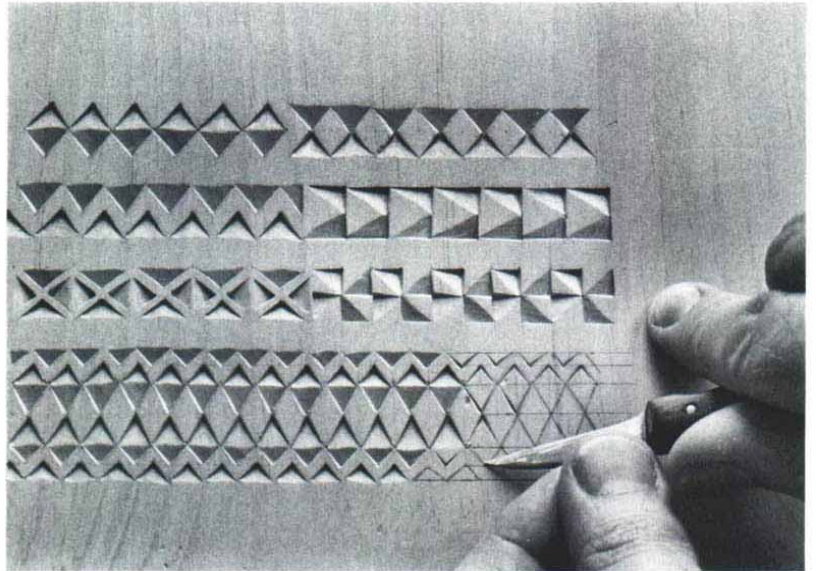
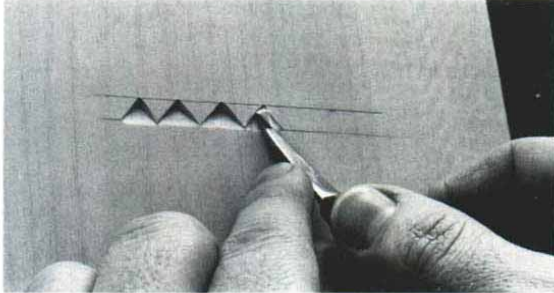
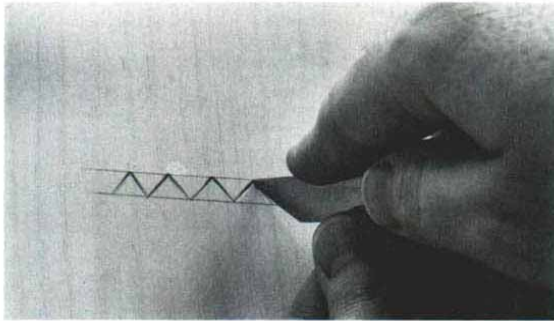
All traditional designs are made up of variations of two kinds of triangular chips. Both chips are quite simple, and it takes less time to carve them than to describe how. One chip is carved with three knife cuts, and the other is carved with six. Both types should be practiced until they become second nature, regardless of the direction of the wood grain. An hour in experimentation can save lots of frustration later.

The triangular chip using three cuts is called the *Dreischnitt* by Swiss and German woodcarvers, who used it for border designs. The first step is to stab out shallow stop cuts on two sides of each triangle. The easiest way to do this is with a sharp skew-bladed knife, though you can use a straight-edged knife. Firmly press the point of the knife into the apex, the deepest pan of the triangle, then vertically incise each wall so that it slopes up to the surface of the wood. With a straight-edged knife, carefully slice out the wood between the two stop cuts. Be sure to watch the direction of the grain to avoid running splinters into the design. When completed, you will have a neat, simple wedge-shaped chip cut into the wood. By combining and arranging these triangles, you can create a great variety of designs and patterns.

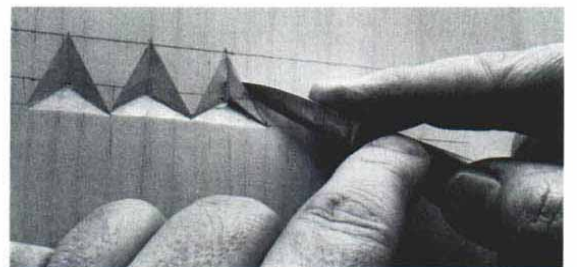
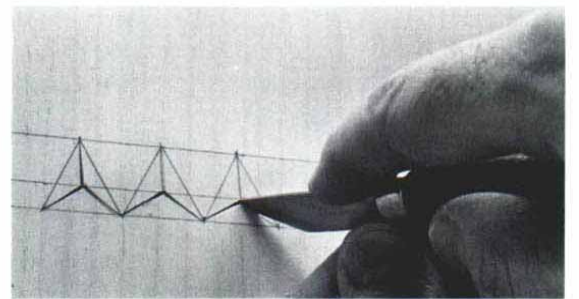
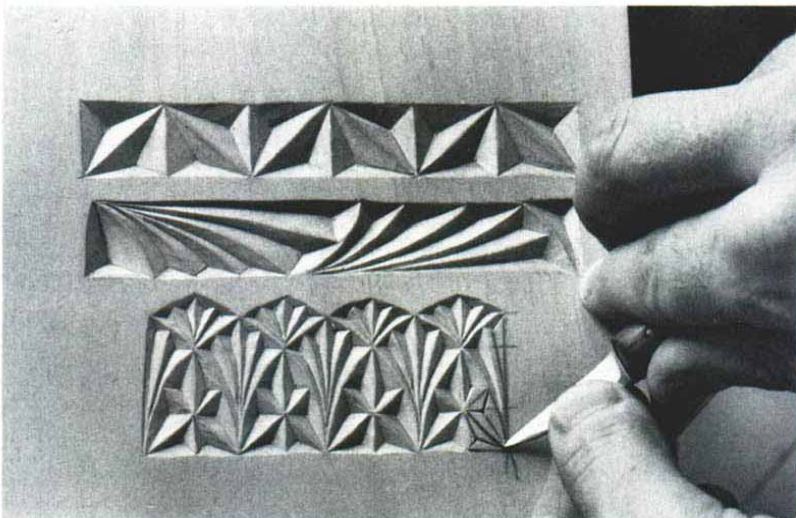
The six-cut chip is essentially three *dreischnitt* cuts combined to form one larger triangle. Place the point of the knife into the center of the triangle and cut out to each of its ver-



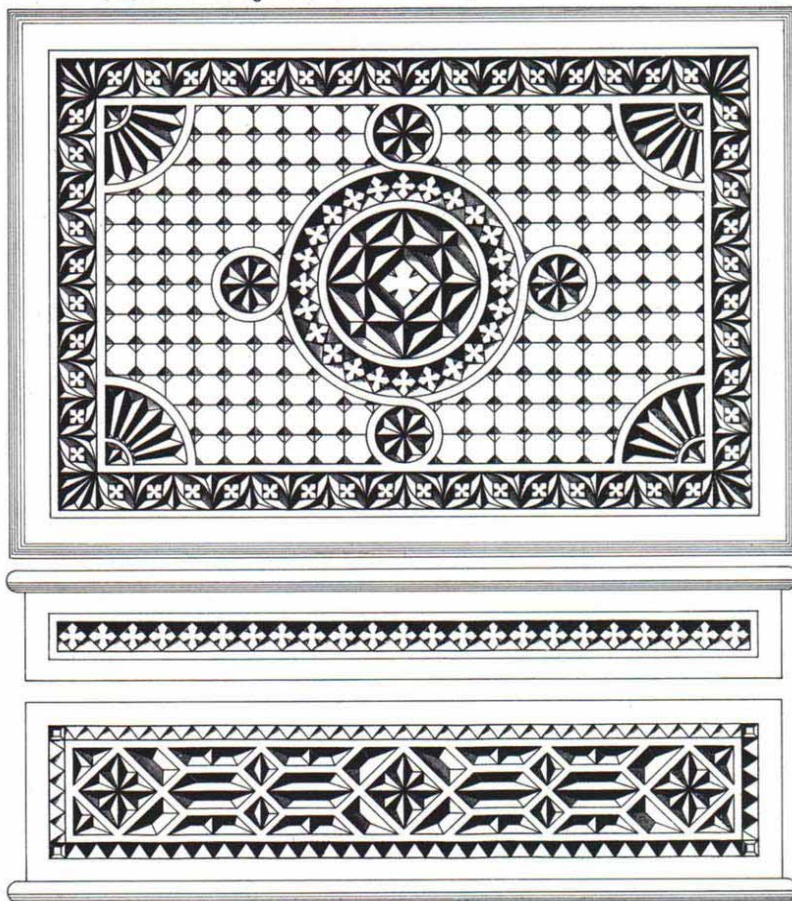
Left, chip-carving tools include a sharpening stone and leather strop for bringing knives to a razor edge, a straight-edged knife for making slice cuts, a skew-bladed knife for stab cuts, and an offset blade. The wood blank is pine, though any soft, even-grained wood will do. Top, a burr is left by sharpening on the stone; subsequent stropping leaves the edge razor-sharp, above.



Make the three-cut chip by stabbing out the sides of the triangle with a skew-bladed knife, top left. Then carefully slice out the remaining wood with a straight-edged knife, left. Above, some traditional dreischnitt border designs.



Six-cut triangles are made by stabbing into the center, top right, and then making a slice cut for each side, right. Above, traditional designs using six-cut triangles can have straight or curved sides.



Match holder,
carved by
the author.

Intricate box pattern used by woodworker Otto Dunnebieer while completing his apprenticeship in Germany about the turn of the century.

tices. Next, slice out three chips, leaving a triangular carving with three sloping sides meeting at the center. In the three-cut chip, the stop cuts define two walls; in this chip, the stop cuts mark the bottom angles of the triangle and will eventually form a reverse pyramid. Again, avoid slicing against the grain. This chip can be carved in a variety of shapes and proportions, with straight or curved sides.

Keep all the chips relatively shallow. The deepest portion of any triangle should not be cut more than $\frac{1}{8}$ in. to $\frac{1}{4}$ in. below the surface of the wood. Going deeper will cause unnecessary difficulties and will detract from the appearance of the carving unless you are working on a large scale. It's also a good idea to keep both hands on the knife when cutting. You'll have greater control, but more importantly, you'll avoid the natural but dangerous tendency to hold the wood with one hand and cut toward it with the other. Brace the work against a small bench hook made from scrap lumber. This will allow you to turn the wood frequently without having to fumble around with clamps.

For carving the match holder shown above, I used a piece of $\frac{3}{4}$ -in. butternut and did all the carving before cutting the block to shape. It doesn't really matter which you do first, but I find working with a larger piece easier and safer. You can use just about any moderately soft, even-grained wood, such as pine, bass, some cedar, walnut and cherry. The English even used oak, but most oak available these days doesn't hold details well.

After carving the pattern and cleaning off the pencil marks, you can give the piece a protective finish. Many old

chip-carved pieces were left unfinished, but you'll find a light coat of paste wax not only helps seal and protect the wood, but also makes the facets of the carving stand out more sharply. You can use other finishes, particularly on eating utensils, but avoid high-gloss lacquer, varnish or any other material that will make your carving appear plastic.

If you would like to use a traditional finish, you might try a beeswax mixture used in Europe for many centuries. Carefully melt about three ounces of bleached or raw beeswax in a double boiler over low heat. Stir in one or two ounces of good-quality turpentine, then let the mixture cool. Within an hour the polish should set up to a butter-like consistency. If the polish is too soft, melt it again and add more wax. If it is too hard, dilute it with a little more turpentine. A small amount of melted rosin can also be added to harden and darken the wax, although I prefer the simpler mixture. Remember that this concoction is highly flammable—if the wax begins to smoke, it is too hot. Should the mixture catch fire, snuff it out with an airtight cover, which you should keep on hand for just such a purpose.

Seal the beeswax mixture, when cool, in an airtight container to preserve freshness. To use, lightly rub or brush a thin layer on your carving. Let it stand for a day so the turpentine will evaporate, then buff with a clean horsehair shoe brush. In time the polish will age with the wood and darken slightly, leaving your work with a warm mellow glow. □

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