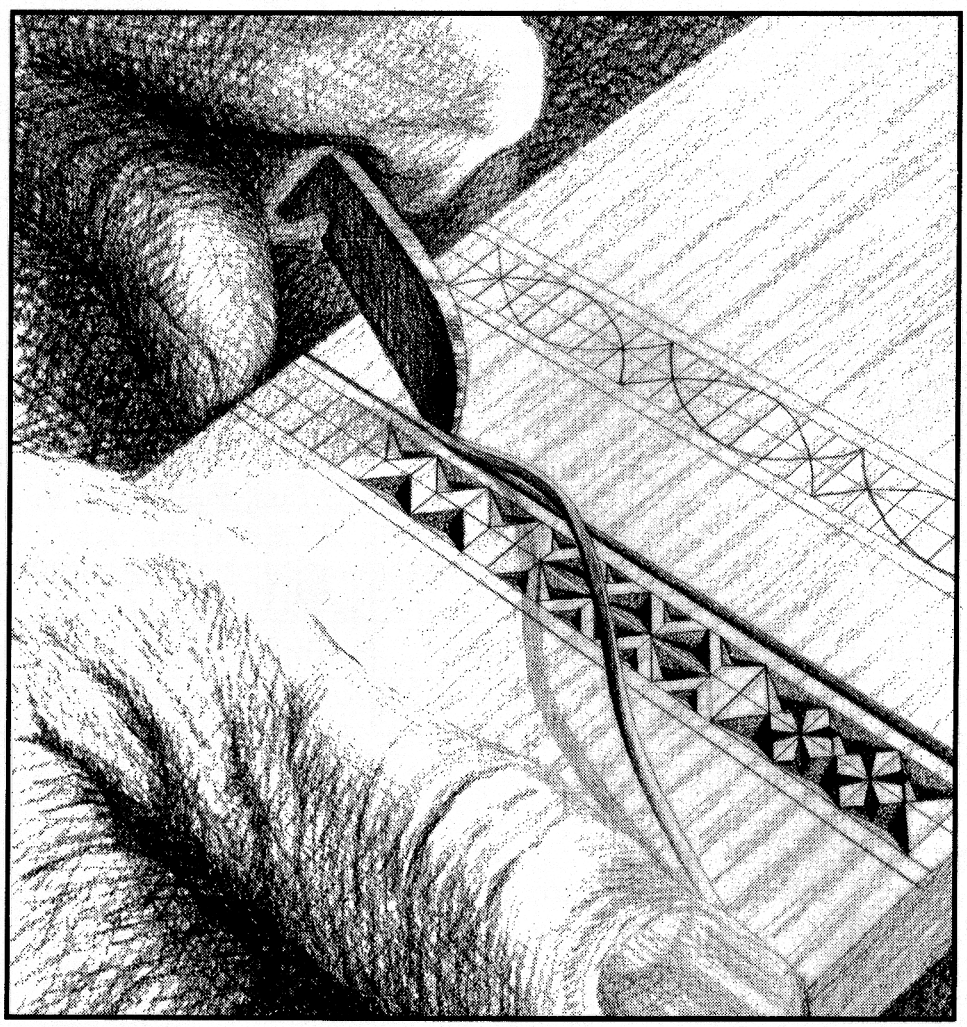
Chip Carving

with **Wayne Barton**



Notes to the video workshop

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Notes on Chip Carving

The ideal condition for learning to carve is to have the teacher look over your shoulder as you work. Because this is not always possible, the next best thing is for you to look over the shoulder of the teacher. That's exactly the viewpoint of this video. In this booklet I'd like to add some thoughts to what the video gives you visually, perhaps answering questions that may occur while watching.

Woods—The best woods for chip carving are close-, even-grained woods of medium hardness. Remember that wood for a carver, in most instances, is a medium of expression, the background rather than the foreground of the work; showy figure can detract from your carving. Among the woods suitable for chip carving, I like basswood the best. All the work shown on this video is executed in basswood. There are others, however, that will also give you fine results, such as jelutong, white pine and patternmakers' pine. Certain species of mahogany, cypress, and cedar also carve well. Much traditional Swiss furniture is made of knotty pine. I've carved quite a bit of this wood with very pleasing results; although the knots sometimes prove difficult, you can carve through them.

Tools—A teacher once told me, "Poor tools discourage craftsmanship." Students have come to my class with an unending assortment of knives sold for chip carving. Invariably, they end up using two Swiss-made Klotzli knives I use in this video, and for good reasons. Most so-called chip carving knives (you can get sets of as many as eighteen) have thin, soft metal blades that wobble or bend when cutting and will not hold a sharp edge. They usually have round or oval handles that roll in your palm, making carving tiresome and frustrating. The funny thing is, you don't need a wide assortment of tools. The Swiss method I use calls for only two knives. And if there were better ones to be found, I'd use them. There aren't. If it says, "Klotzli" on the blade, you have the best.

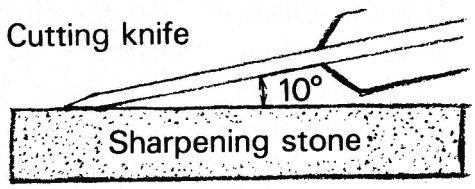
The steel in both knives is a high-carbon alloy hardened to hold an edge well. In the course of a day of carving, I will usually freshen the blade only once or twice. The blade is thick enough to give you confidence to go after large chips without bending or snapping the tip. More importantly, each blade is the proper shape and length to give you the correct approach and leverage for this work. The handles are shaped to fit in your hand, giving you hours of comfortable carving.

The other tools needed include a good mechanical pencil and compass. I recommend a grade-B lead for both. It's soft enough to give a good, dark line without a lot of pressure, and it erases easily. You'll also need an eraser and a ruler or small T-square. I use a 12 in. plastic T-square, incremented in both inches and centimeters.

Sharpening—Through the years I've sampled many methods of sharpening. The finest results I've achieved were with the ceramic sharpening stones you see in the video. They need no water or oil while being used and may be cleaned with an abrasive cleanser or a Scotchbrite pad. The ceramic material in these stones is so hard it's virtually impossible to "dish" them. With proper care, they'll last a lifetime.

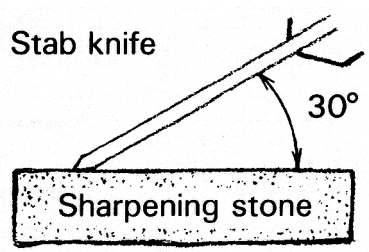
The medium-grade black stone is for shaping and sharpening the blade. The while ultra-fine stone has been surfaced absolutely flat with a diamond wheel, and will polish the bevel behind the edge to a mirror finish. It's important to do this because scratches made by the coarser stone will cause the blade to drag.

Both stones must be larger than the edge being sharpened, so that the whole of it is sharpened at the same time. This will help keep the cutting edge straight. To begin, place the cutting knife flat on the medium stone. Raise the back of the blade no more than 10° from the stone and stroke evenly back and forth, keeping the angle constant. Don't be afraid to use pressure. Concentrate on putting equal pressure on the tip and heel of the blade so that the tip doesn't become rounded. Rounding the tip will change the angle of approach to the wood, compromising cutting efficiency. Your blade is sharp when there's no burr on either side and light does not reflect off the edge.



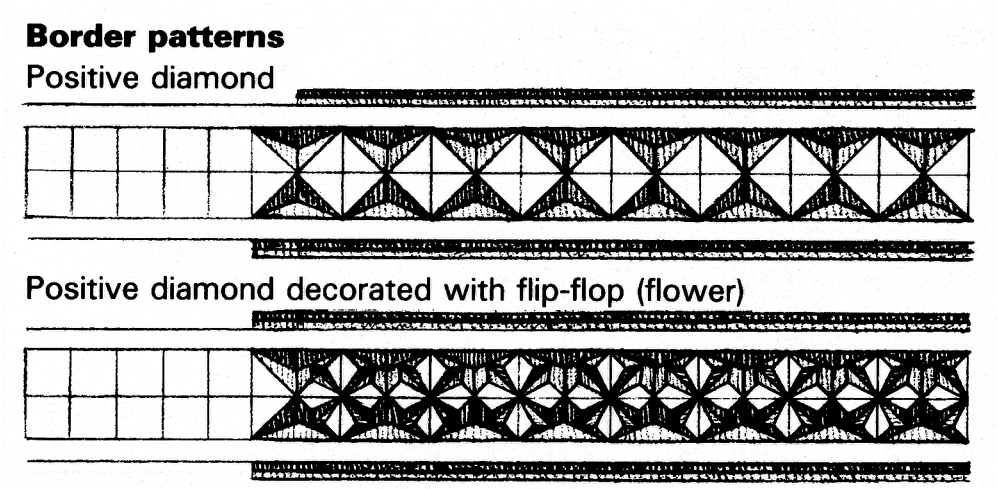
Now you are ready for the white ultra-fine stone. Use the same procedure as you did with the medium stone until the scratches are polished away behind the cutting edge. This can take only a few strokes. It's not necessary to polish the whole blade. As you carve and the blade becomes dull, you need only to freshen the blade on the ultra-fine stone, as you see me do in the video.

Sharpen the stab knife the same way as you did the cutting knife, except hold the blade approximately 30° of the stone instead of 10°. An easy way of doing this is to use the factory-ground angle as a guide.

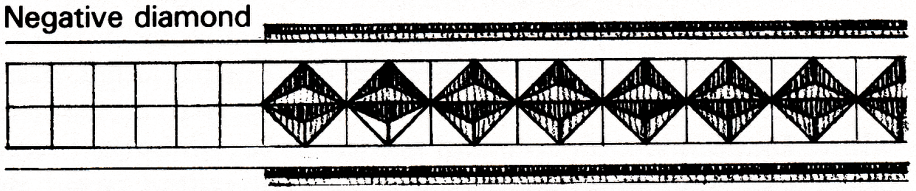


Layout—Many of the borders used are based on 4mm increments. This usually gives rise to two questions from my students. First, why millimeters? The answer is one of practicality. It is easier to count 1-2-3 than to work with a series of fractions. Our purpose here is to learn carving, not test our mathematical ability with possibly embarrassing results. Question two, then, is why 4mm? A moment of trial will tell you that 3mm is too small and 5mm is too large. Working with borders of 4mm increments will make chips easy enough to execute and of pleasing proportions. If your work needs a larger border, you might double your chips, as in the lace border going from a single to a double-lace pattern. This doesn't double your chip size, but merely repeats the basic cut.

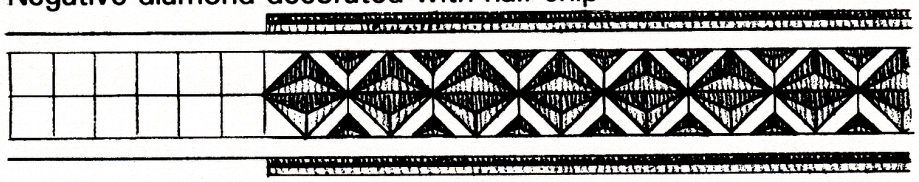
Of course, there are exceptions. These are not hard and fast rules, but guidelines. Chip carving designs are virtually infinite, and much of the fun is in conceiving them. But for a start, here are plans for the patterns carved in the video:



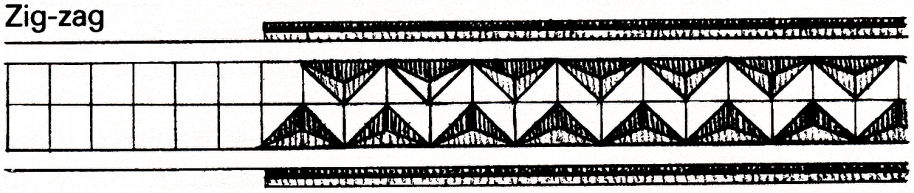
Negative diamond



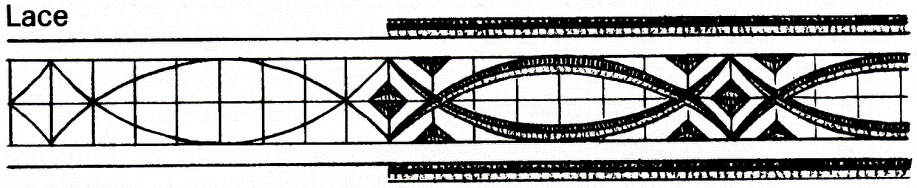
Negative diamond decorated with half-chip



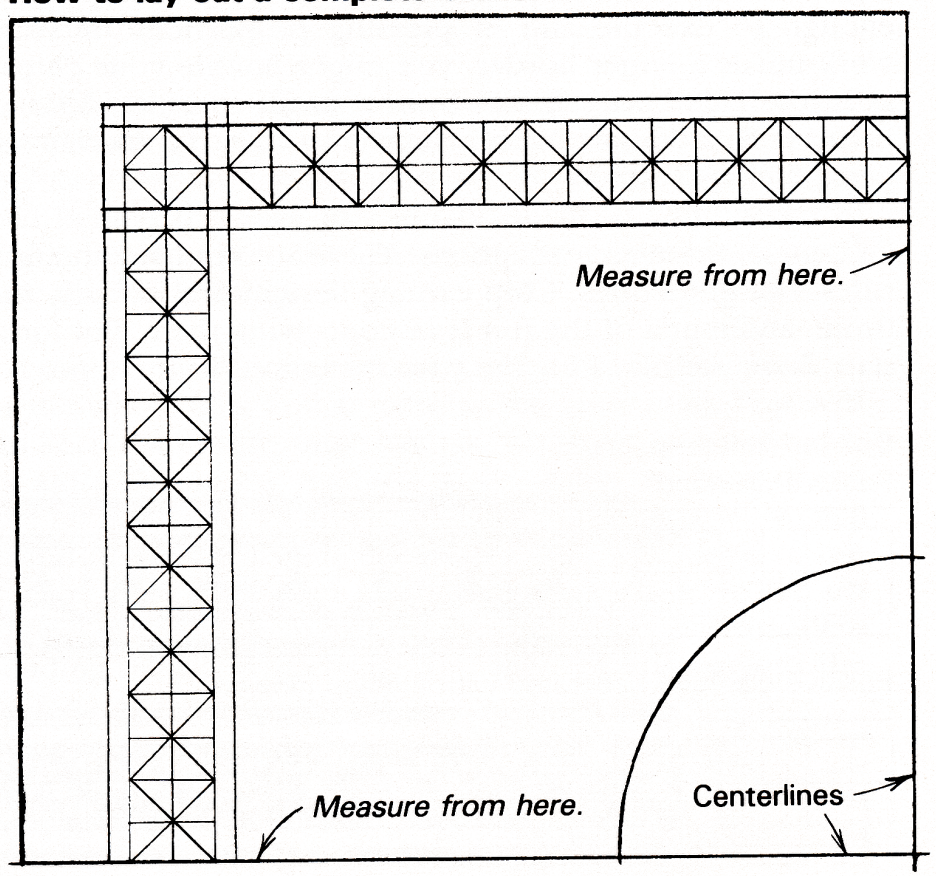
Zig-zag



Lace

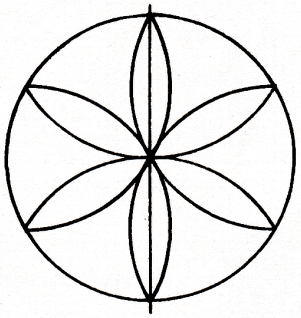


How to lay out a complete border



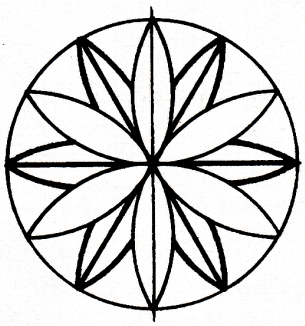
12-point rosette

1



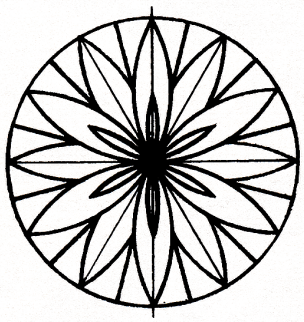
Draw a circle and bisect it with a vertical line. With the compass set at the same radius, scribe arcs creating the major petals.

2

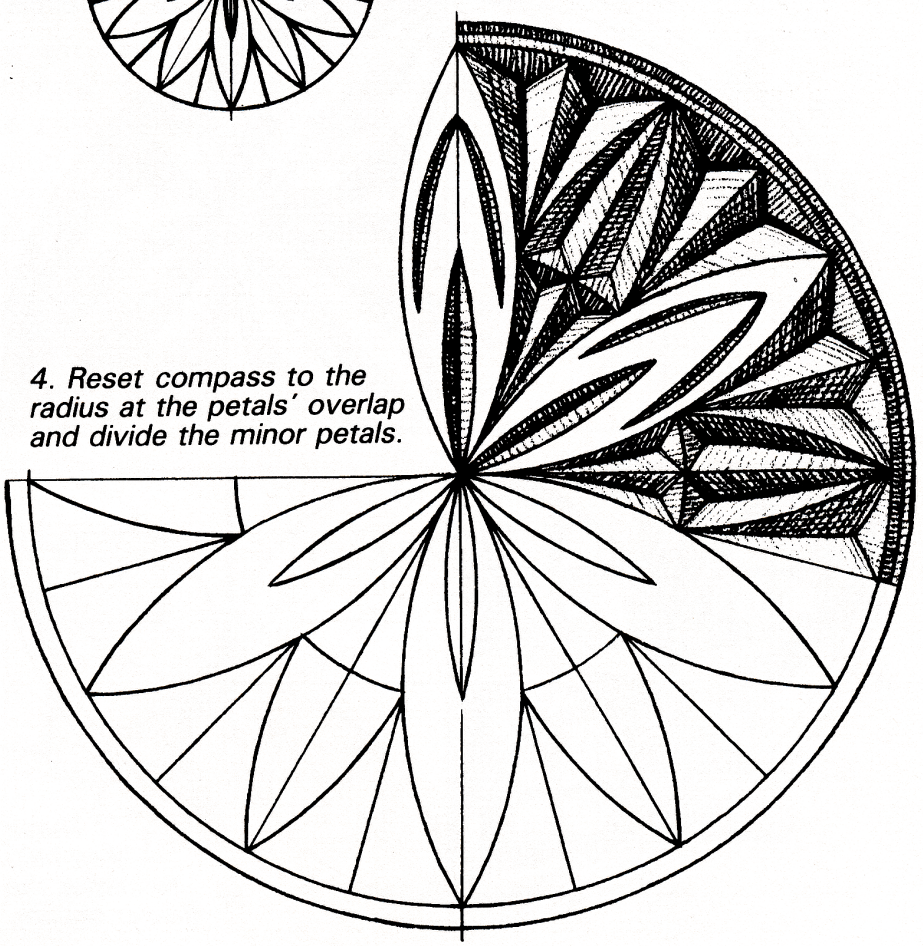


Bisect the circle with a horizontal line and scribe arcs creating the minor petals. Bisect the circle through the remaining minor petals.

3

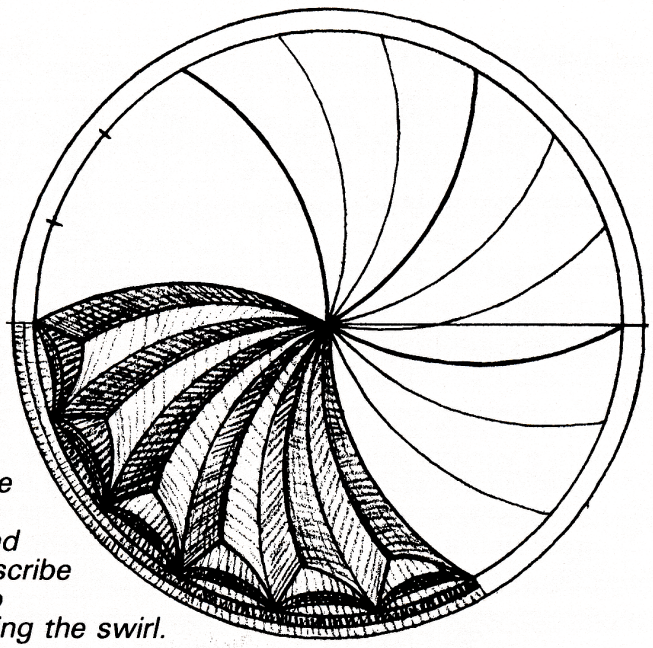


Draw radial lines between the overlap of major and minor petals and the circle's perimeter. Scribe arcs from these points on the circle's perimeter to create the inner petals.



4. Reset compass to the radius at the petals' overlap and divide the minor petals.

Swirl rosette

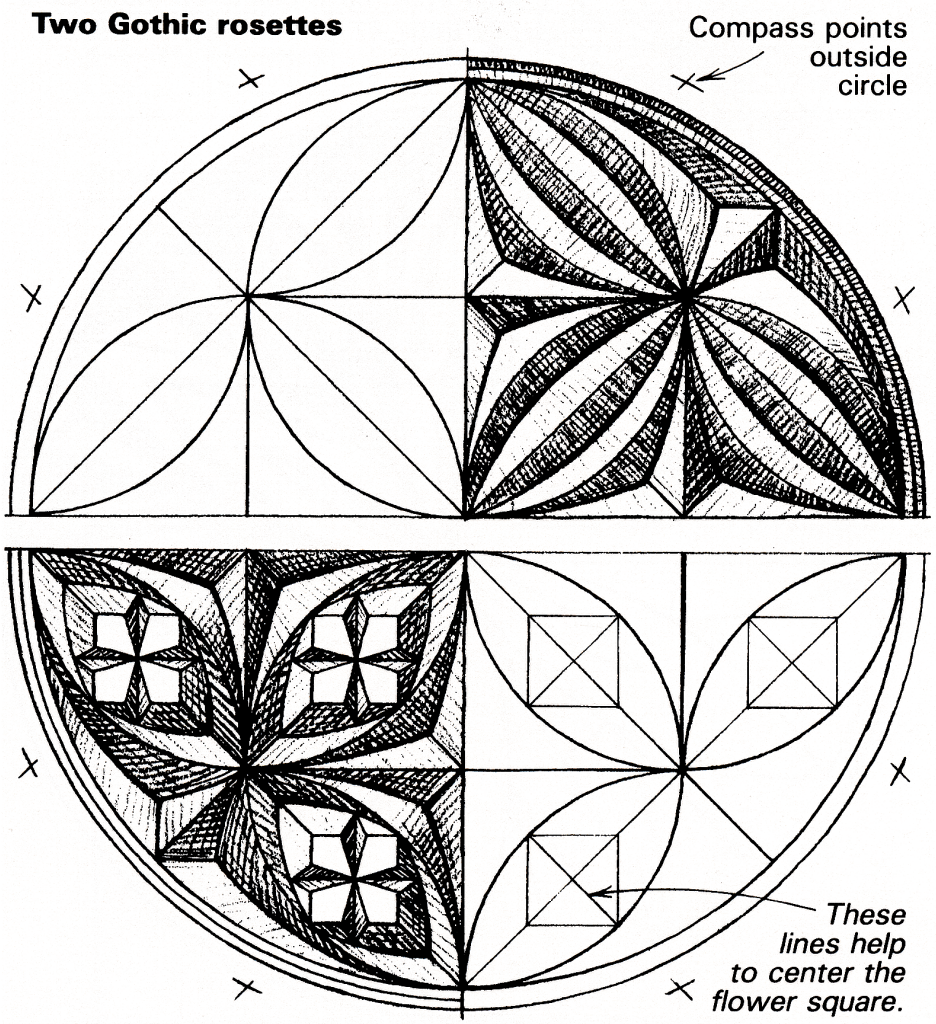


1. Draw a circle and bisect it with a horizontal line.

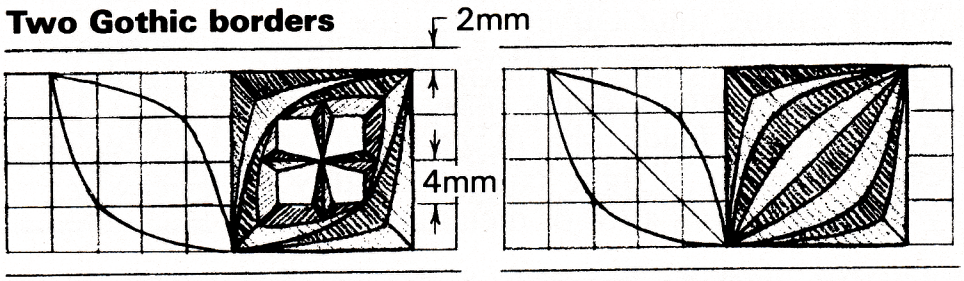
2. Scribe six arcs from the center to the perimeter.

3. Divide one of the perimeter sections into three parts, and from these points scribe arcs from center to perimeter, completing the swirl.

Two Gothic rosettes

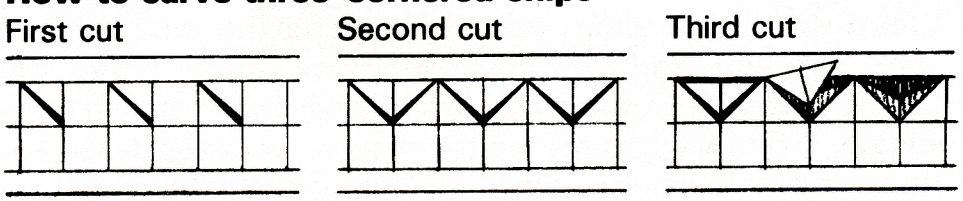


Two Gothic borders

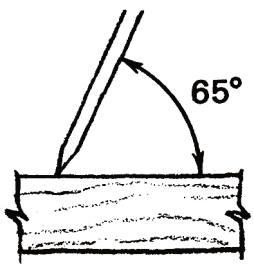


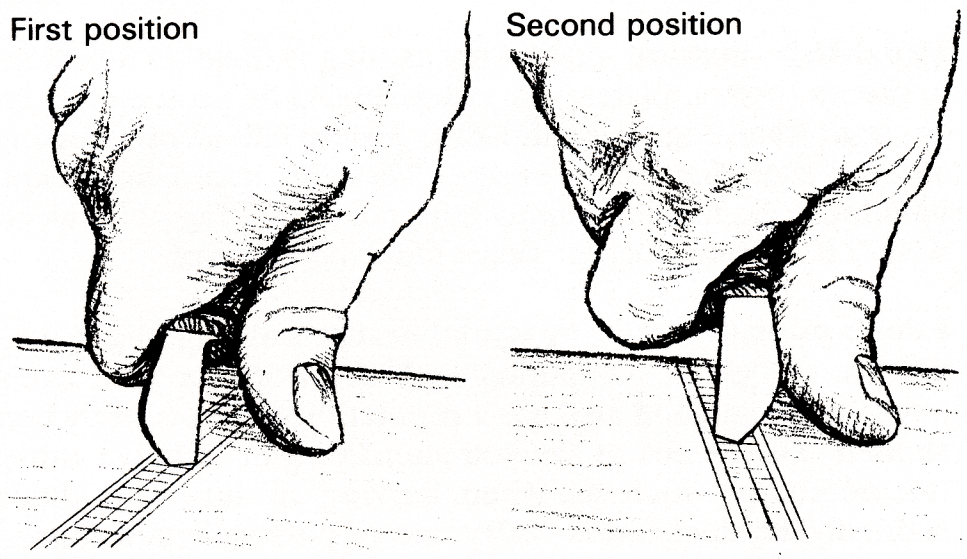
Carving—Whenever possible, carve in your lap, not on a table or bench. This will give you much better leverage and strength. You get to use your upper body to the best advantage, and repositioning the wood for complementary cuts is quick.

How to carve three-cornered chips



To reiterate some essential information from the first part of the tape, the blade of the cutting knife shoud be kept at a 65° angle. Whether in the first or second position, our thumb should be against the handle. This will lock the blade at the constant angle, giving you complete control and safety while carving. you will also be able to use your thumb as a pivot when cutting curves and making circles in the first position.





When cutting tight curves, stand the blade up from the surface, lifting the handle without changing the side angle, to reduce the amount of blade edge in the wood. You can't negotiate a tight curve smoothly if you are dragging a lot of metal around it.

Large designs can be more easily carved if you reduce the size of your chips by dividing them up in any number of ways. Experimentation will present new design possibilities, too.

Clean your chips out completely as you go along. It will be easier to see where you've been, how you're carving, and how best to finish what is left.

Cleanup—If you draw your layouts with soft, grade-B lead, you will find cleaning your work much easier. The lines I've drawn in the video are heavier than I usually use, so they'd be easier to see on the screen. Working with faint lines makes clean-up simpler. When the design has no ridges (as in a rope border), the pencil lines can be removed with a 220-grit sandpaper. When the design does have ridges (as in the gothic border), sandpaper would flatten them. I find an ink eraser works well—better than a less abrasive pencil eraser. It's important to keep ridges sharp and crisp. In chip carving, this makes the difference between average and excellent work.

Another trick that lessens clean-up is to carve your lines off as you go along. To do this, make your cuts just beyond the pencil line. Remember to offset your knife to the same extent each time. Consistency composes chip carving's charms.

Finishing—Because most of my carving is done on functional pieces (boxes, plates, etc.) they should be protected from constant handling, dust and dirt. Almost all of my work is sprayed with flat polyurethane. The dull sheen keeps the wood looking natural. I spray light coats, sanding in between with 220-grit sandpaper. Don't sand the last coat.

I don't normally stain my work because staining might pronounce the grain, competing with the work for your eye's attention. Basswood also has a reputation for mottling when stained. This is not to say you should never stain. At times it's necessary, such as when carving in furniture that's stained. The decision is really one of personal preference.