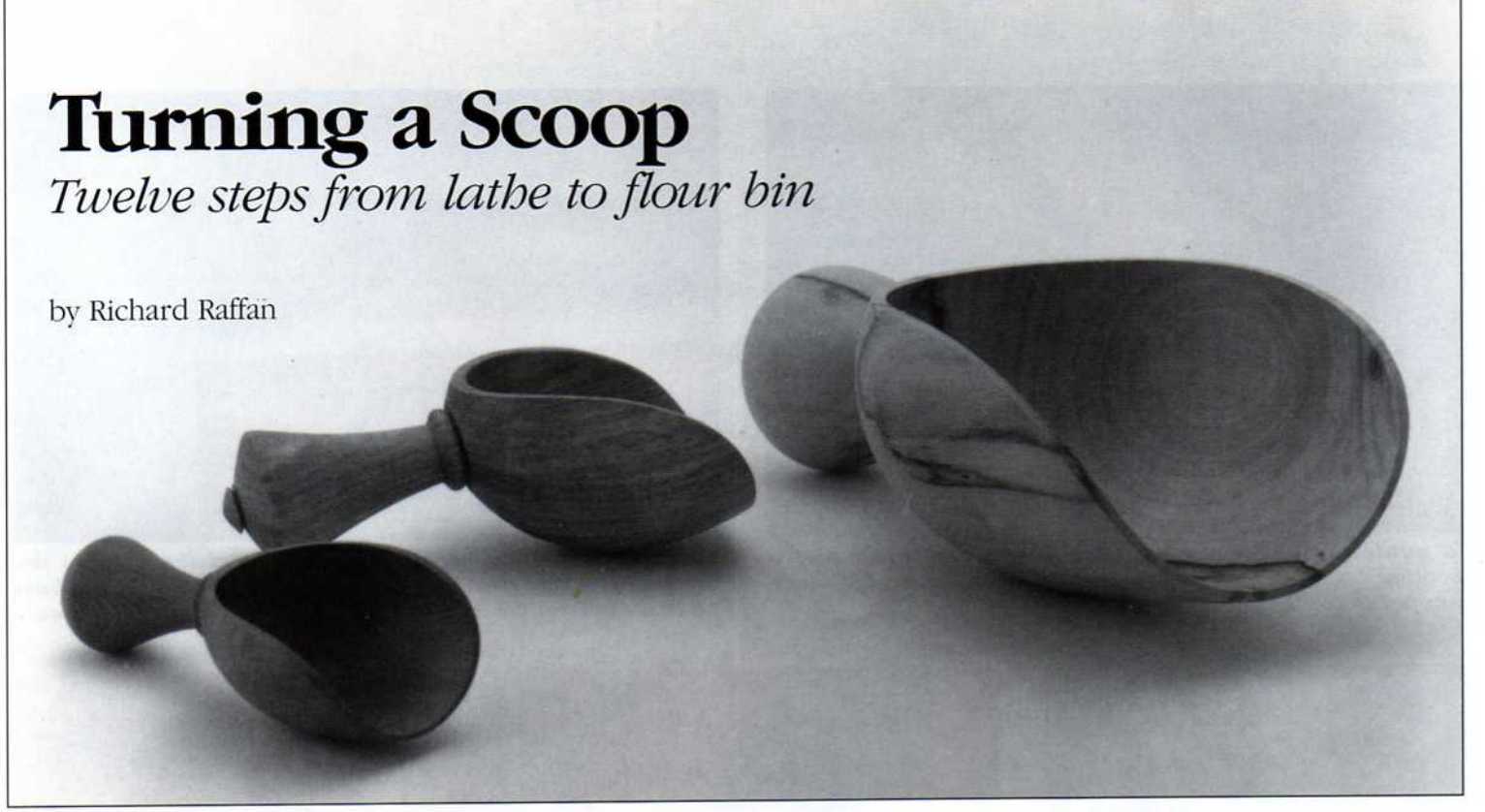
Turning a Scoop

Twelve steps from lathe to flour bin

by Richard Raffan



Turning a lump of wood that is spinning on a lathe can provide you with some of life's more satisfying and sensual experiences, as well as being just good, plain fun. As streamers of curly shavings and smooth, flowing forms emerge as if by magic, you can make yourself all kinds of useful or utterly frivolous bits and pieces.

When I began to turn wood in 1970, I had no experience of the craft. But by making many hundreds of the same designs, I developed most of my basic technical skills. Scoops have always been one of my major production items. I've made around 45,000 of them, and in the 1970s, I reckon that they paid all the basic bills while doing wonders for my turning technique. My first scoop design was based on a vague memory of a Georgian silver sugar scuttle, although today I find that the handle is embarrassingly chunky and the bowl too heavy and steep shouldered.

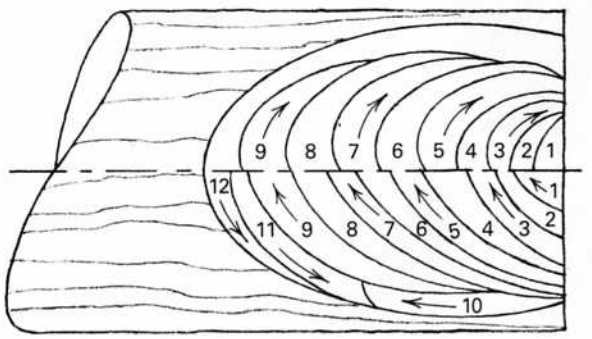
A scoop is conceived as a stem beneath an elongated bowl or cup, which is partially cut away to create the scoop. It is essential to appreciate that the bowl bellies out from the rim and that the curved wall is of near even thickness. The thickness of the wall can vary slightly without compromising the form if both the inside and outside are smooth curves. But, as many plagiarists have shown, a cumbersome look is the reward if you get it wrong. Scoops are not as easy to make as their form might imply at first glance, let alone at the speed required to be competitive.

Scoops have to be turned, not drilled. Anybody can drill a hole into endgrain and chop the end off at an angle, but I regard scoops made this way as ugly in their angularity. What we are after here is a form that is altogether more sensual, as shown above.

Avoid fresh-felled wood for scoops—the bowl can distort off-center and the handle can split as the wood dries. The grain should be fairly straight, but this is not as essential as it is for a thin spindle. The curves mean that you cut mostly across the grain and can cope with the odd twist, especially in the bowl. Start with a blank 2 in. (50mm) to 2½ in. (65mm) in diameter and 4½ in. (115mm) to 5½ in. (140mm) long. Larger or smaller blanks create problems, so they are best avoided initially. Mount the blank on a small faceplate or in a collet chuck, as shown below, and run the lathe at about 1,800 RPM.

1 After truing the blank, I back-hollow into the endgrain (shown in the photo at right) using a ½-in. (13mm) half-round gouge, which removes the bulk in only a few seconds. As with little bowls, I always complete the inside of the blank before shaping the outside to maintain the maximum amount of supporting wood; if you turn the outside shape of the blank first, you will make hollowing the inside infinitely more difficult. If you are turning only one or two scoops, you might find it helpful to drill a depth hole before starting to hollow. In addition to indicating the correct depth, the hole makes the back-hollowing cut easier to start.

Fig. 1: Two options for hollowing a scoop



1-9 Back-hollowing cuts for shear cutting away from the center using a gouge

1-9 Standard hollowing cuts into the center using a gouge

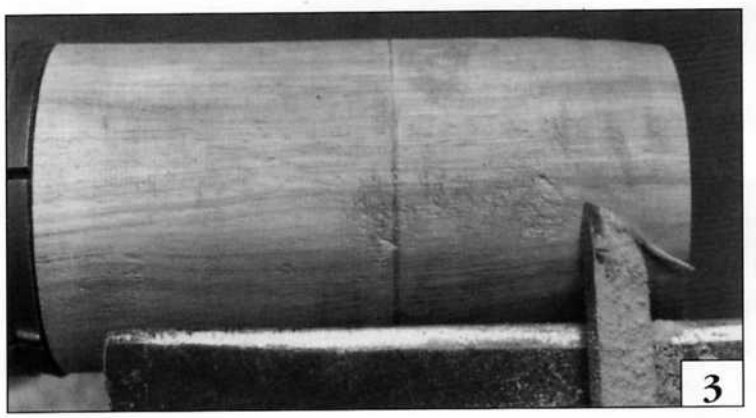
10-12 Scraper cuts

2 With the bulk removed, use a wide scraper to complete the hollowing. The tool should have a long left curve (shown at left) to eliminate corners that might score the surface. Develop the internal curve by undercutting the rim, and reach into the far corner of the hollow from the direction you are working. Make sure that internal bowl depth is at least equal to the outside diameter. (See figure 1 for hollowing options.)

3 Next, mark the internal depth of the scoop on the outside of the blank. Don't mark closer to the headstock to allow for wall thickness at the scoop's bottom or you'll lose track of exact depth. Sand the inside before shaping the outside to remove pencil marks and to establish the surface to which the outside relates. If you sand the inside and outside together, it is easy to develop a sharp rim that can cut you.

Develop the curve into the rim (shown below left) using a skew chisel (cut 2 in figure 2). If you feel comfortable with the skew, you'll find it efficient to make the parting cut first (cut 1) and then turn the bowl.

4 Part in on the internal depth line (shown below right). You'll learn the finer limits only by parting off a few bowls. In general, part in to just under half the original diameter.



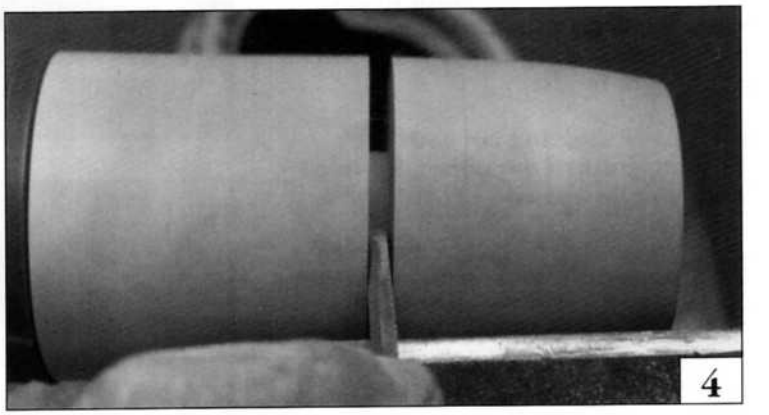
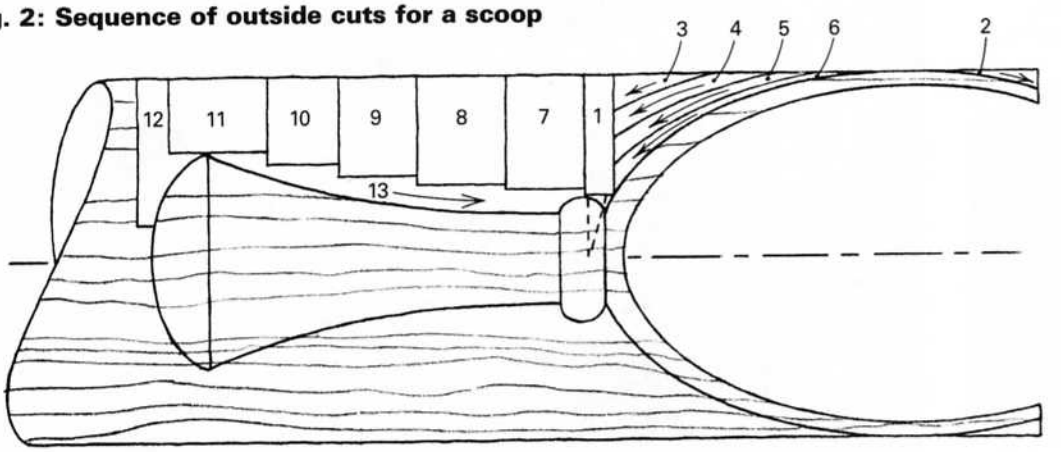


Fig. 2: Sequence of outside cuts for a scoop



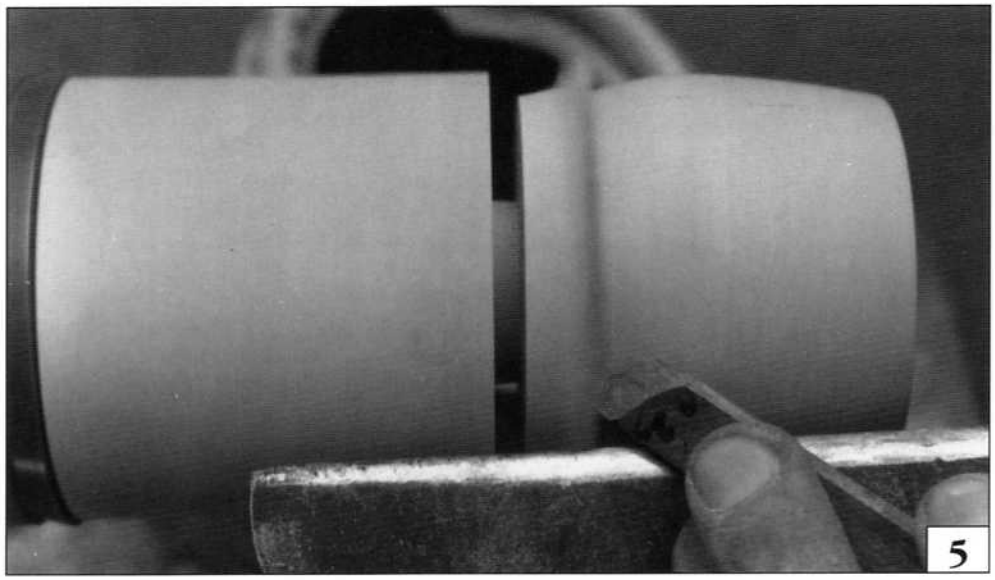
1 Parting tool

2-6, 13 Skew chisel shearing cuts

7-12 Skew chisel peeling cuts

5 Cut the curve using the skew chisel (shown top right). Initial cuts with the long point can be heavy if the force used is parallel to the axis, because the fibers that split along the grain will break at the parting cut. The idea is to project, in your mind's eye, the curve you're cutting to as the point where the headstock side of your parting cut would intersect the axis.

Check wall thickness with your fingers, which will become reliable calipers; however, check mechanically to confirm that you have what you feel. Never use calipers to measure wall thickness with the lathe running. You can also ensure consistent wall thickness by drilling a hole or two in the portion that will be cut away. Then all you have to do is stop the lathe and peer through. This also eliminates possibly scoring the interior with the calipers.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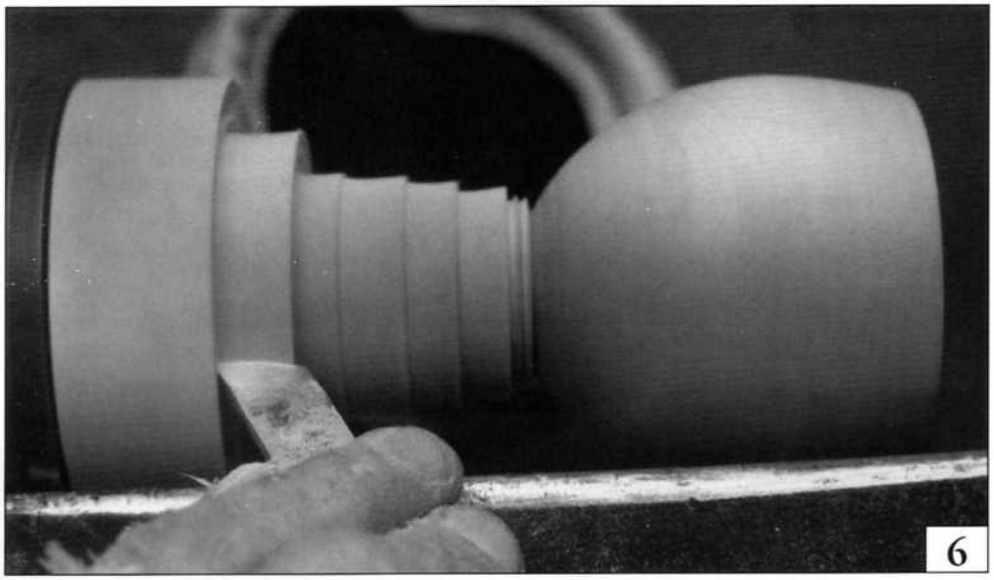
6 Now develop the handle. You can use a gouge, but it's faster and more satisfying to make a peeling cut with the skew chisel flat on the rest (shown at center). Use a square-section skew for stability, rather than an oval-section one, which will wobble. Next, refine the base of the bowl with the skew's long point, and take a cut from the end of the handle to the base of the bowl to establish overall proportions.

Use the skew's long point to develop the bead and put a curve on the handle—straight lines are harsh and not nice to fondle.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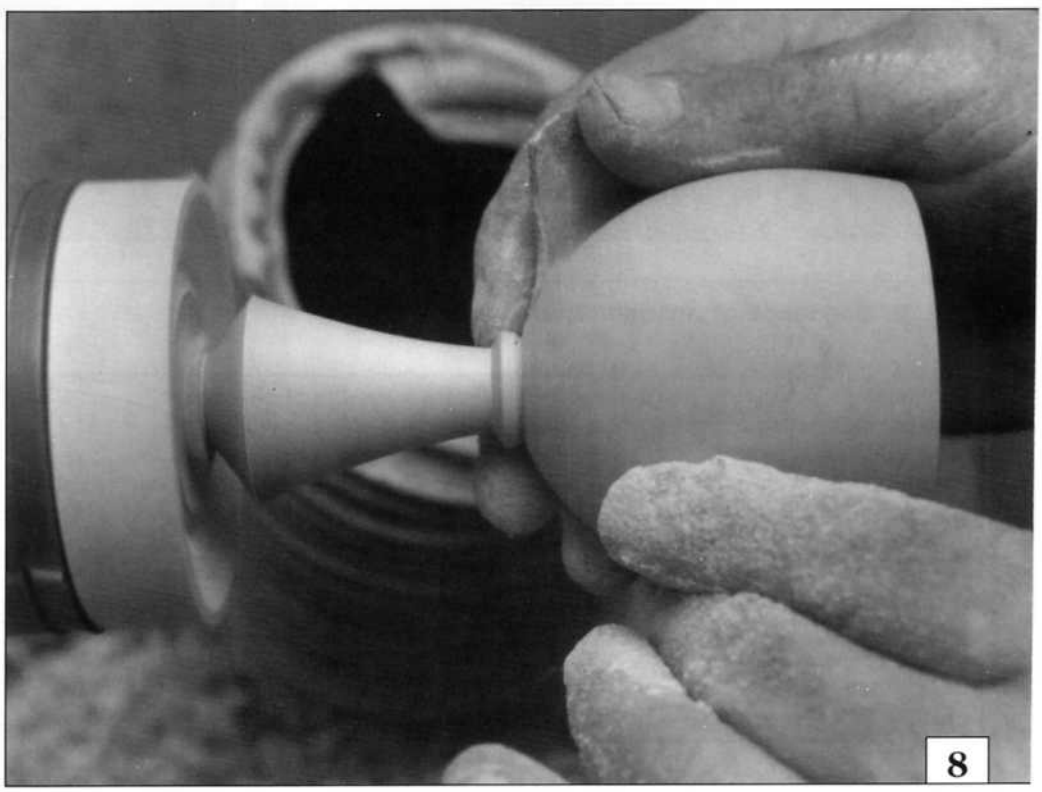
7 Take a shearing cut with the long point of the skew (shown below) to shape the end of the handle.

8 Now sand the outside. Pressure against the axis must be equalized by your fingers on the opposite side (shown bottom right) to avoid pulling the piece free. I don't apply an oil finish now because it collects dust when I sand later. There shouldn't be a problem with a hard finish, like varnish. With the outside sanded, part off using the skew's long point.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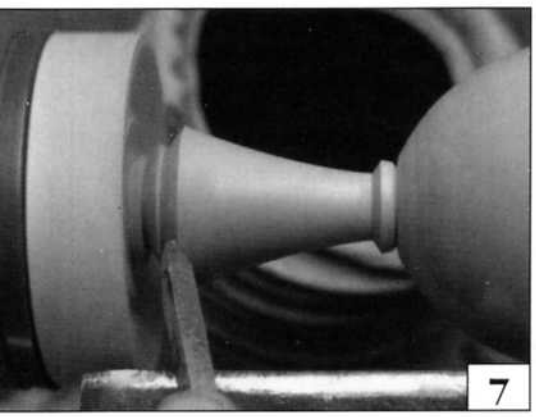
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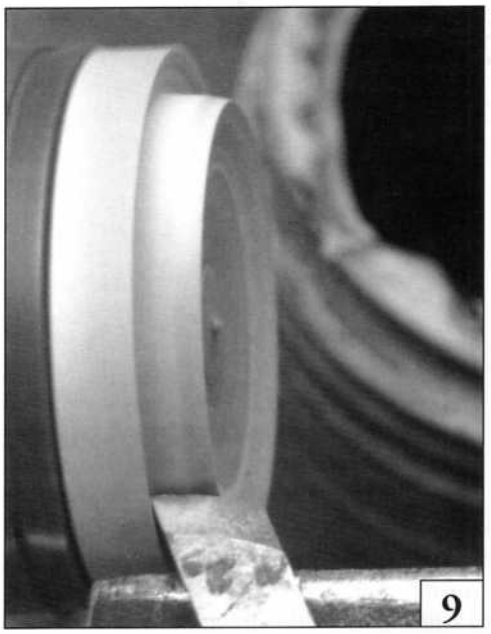
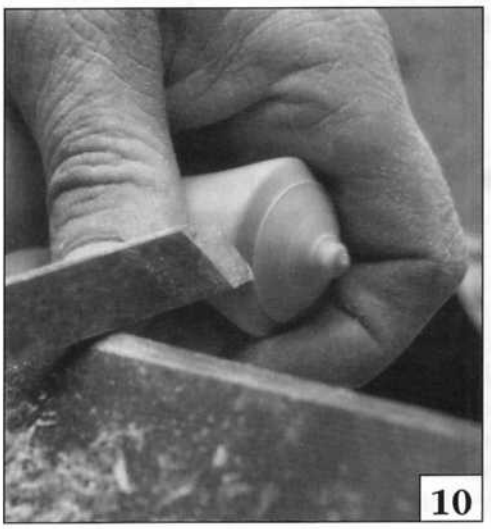
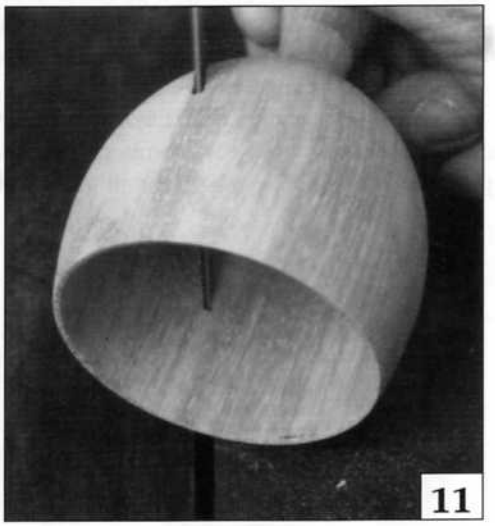


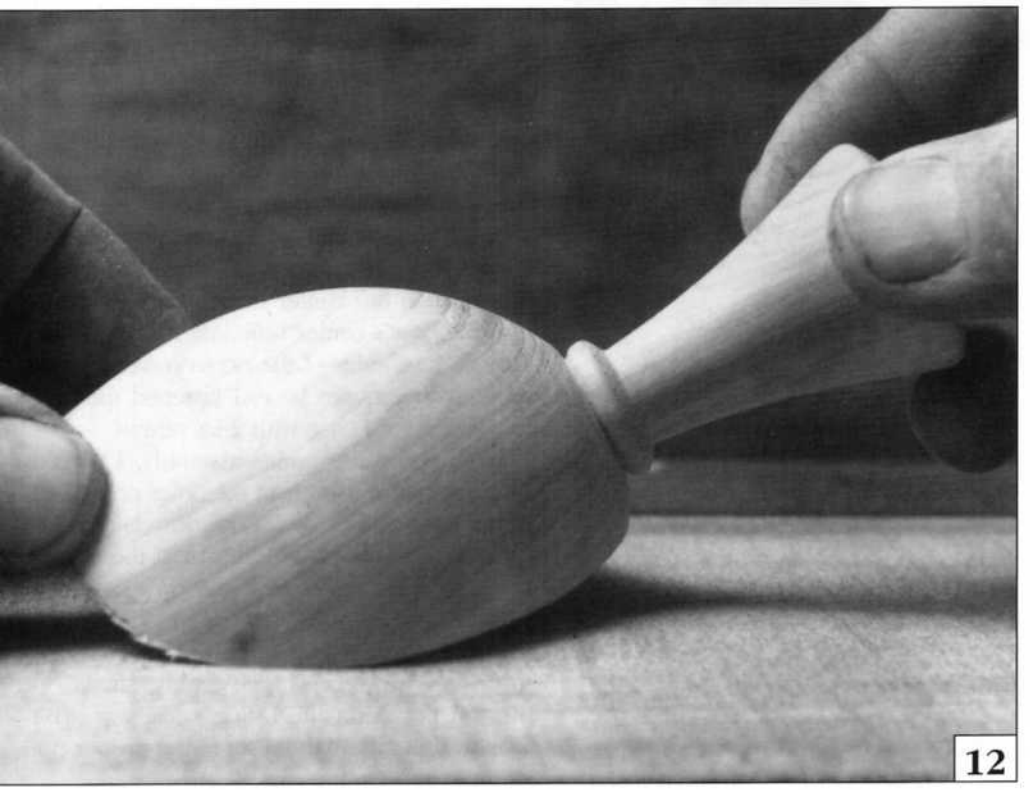
9 Turn a taper chuck (shown above left) upon which to mount the scoop so that you can turn the end. Make sure that the rim abuts the chuck shoulder for stability (shown above right). This is tricky, and in production I find it faster and less nerve-racking to sand the handle ends smooth on the belt sander.





10 I use my hand to support the scoop as I turn the end. My thumb acts as a fulcrum for the tool (shown center left) as well as a pad between the scoop and rest should the scoop come loose. Because the fixing is tenuous, use the point of the skew rather than taking a shearing cut, so the wood won't roll up the tool edge. You'll need plenty of support to keep the scoop on the chuck.

11 Finally, I cut away the scoop. I use a bandsaw (shown center right) and grip the scoop's handle firmly to prevent the piece from rolling into the blade at the start of the cut. My fingers are behind the blade so that if it snatches or shatters, my fingers are clear of the teeth. (Alternatively, remove the bulk on a 40-grit to 60-grit belt sander or disc sander and finish with 120-grit to 180-grit.) Once the blade has entered the wood, problems should be over, because the back of the blade supports the form. Pull the scoop through the blade, pivoting it slightly to develop the curve. Always err on the side of caution—bits cut off can't be replaced, while undercutting is easily sanded away.



12 To finish the scoop, sand the curve smooth. This is best done on a belt sander (shown at left) because all parts of the abrasive move at the same speed. Keep the curve fuller rather than flatter. Finish the scoop with oil, varnish or sealer. □

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