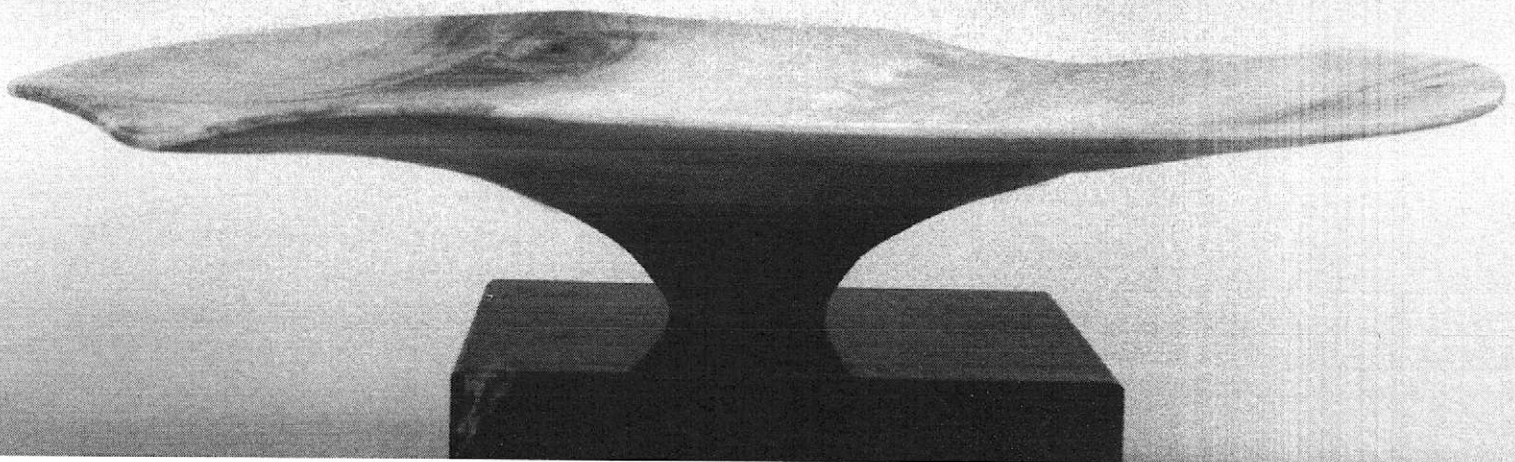


# POTATO CHIP BOWLS

*When warping is wonderful*

PETER M. SMITH



The unique shape of this maple bowl, 10 inches in diameter, is the result of turning it thin while green and allowing it to warp as it dries. Note the kink in the rim caused by the tension of crotch grain in the blank.

WOOD MOVES WITH CHANGES IN humidity and moisture content. Cabinetmakers try to control this movement with either strong joints (the dovetail, for example, ) or, more advisedly, by allowing for the movement in the design. Bowl turners can reduce this movement by roughing out and drying their bowls as thick stock, and then re-turning the warped bowl true. On natural-edge bowls, an oval-warped shape is not noticeable because the contour is already irregular, but in general, warping distorts the expected circular form and can destroy the aesthetics of the piece.

We can, however, exploit this movement and create dramatic warping effects on thin-walled green bowls. Some of Del Stubbs' paper-thin pieces, for example, curl almost into cylinders.

## The potato chip design

The following design, nicknamed "the potato chip," exploits the warping effect to a maximum with gener-

ally pleasing results. I would like to say generally *predictable* results but the natural movement of the wood is always unique, and the final result is sometimes more successful than others. The idea is to turn thin, green, wide bowls, and then leave nature to add the waves.

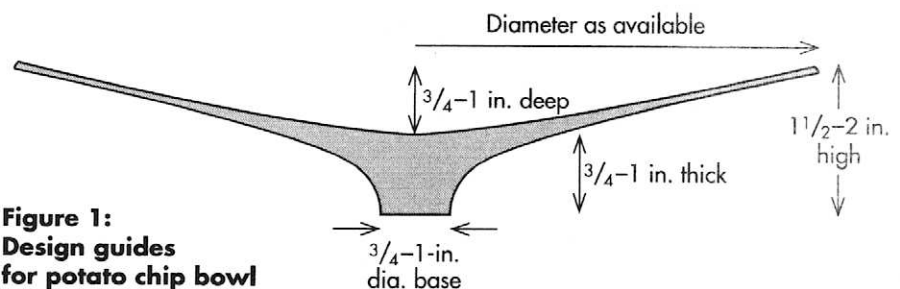
The preferred proportions are shown in Figure 1, below, and the main elements are graceful, sweeping curves on the underside, rising from a narrow foot to the wings, with a shallow depression on the top. Wide, flat wings of consistent thinness will warp nicely. Without

the foot, the plate-like disc would not "lift" from the table. Different woods warp at different rates, with the fruit woods, particularly apple, showing the most dramatic effects. Knots, veins, and crotch grain will add tension which provokes further buckling of the edge.

## The process

These bowls waste a fair amount of wood and are worth attempting only with 2- to 3-inch-thick blocks of wet wood. The diameter can be 3 to 12 inches.

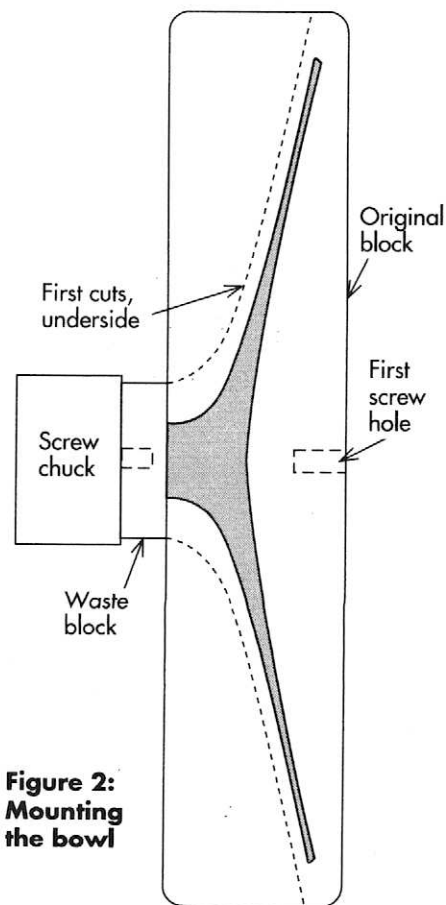
I usually start by mounting the



**Figure 1:**  
Design guides  
for potato chip bowl

block on a screw chuck and turning from the base through the sweeping curve that will be the underside. Then I affix a waste block to the base with cyanoacrylate glue and reverse the bowl on the chuck to finish the underside and define the foot (Figure 2). I recommend sanding, sealing, and finishing the underside here because once the bowl is thin, it will warp, and completing the underside will be difficult.

Addressing the topside, and using the first screw hole as a guide, I initially rough-cut to the general shape, with the wings still relatively thick ( $3/16$  inch). A delicate cut is necessary to define the beveled edge. Then with a deep breath and a sharp gouge, I take one continuous cut from the edge to center, to leave the wings close to final thickness ( $1/16$  or less). There is little room for repeat cuts here. Next, a sharp heavy-duty scraper can be used to shape the inside, pressing your left (gloved) hand against the underside to balance the force of the scraper. This risks tearing some grain but does re-



**Figure 2:**  
**Mounting**  
**the bowl**

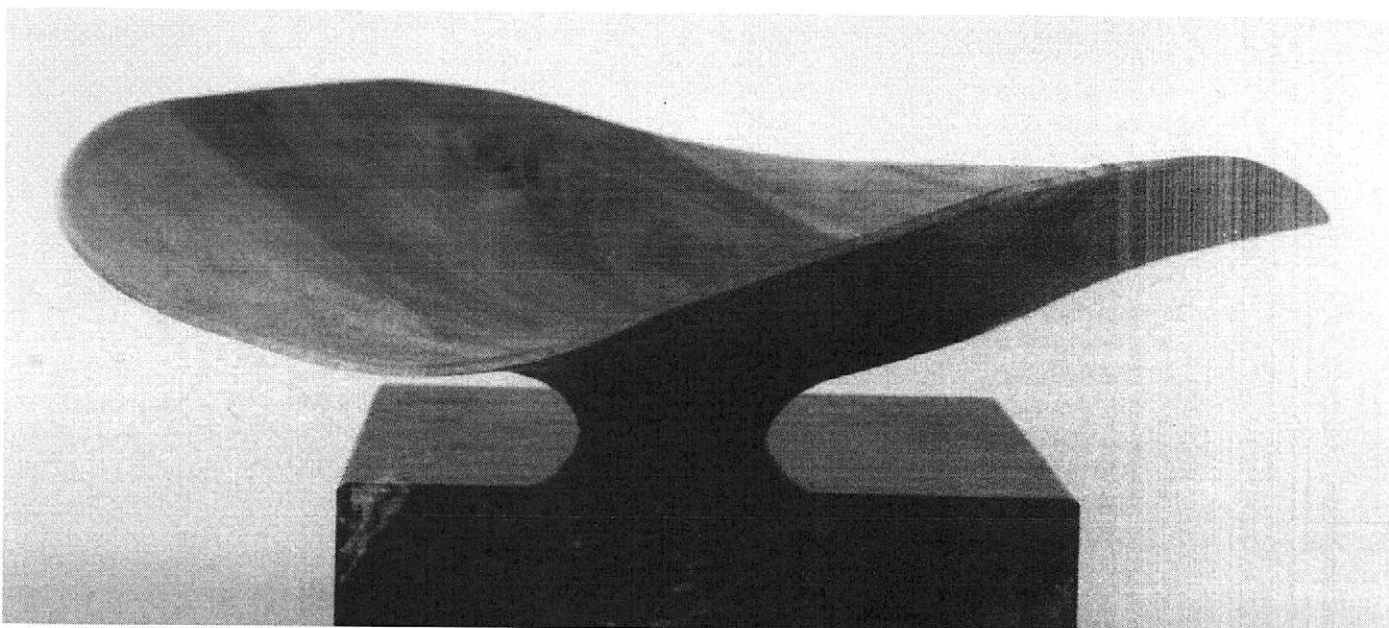
move the irregularities caused by the gouge. A bright light behind the bowl will indicate uniformity of thickness. Finally, the inside top surface can be sealed and sanded.

You can now part the bowl from the lathe. Flatten the base on a belt sander; with enough happening on top, the foot requires no detailing.

### The waves

While still on the lathe, the rim will begin to buckle. Within hours of parting, the initial wave form will be evident and will develop over the next few days and weeks. This is an exciting phase, and it is almost like watching a flower grow, where the natural adjustments of the wood, as it moves and shapes itself during drying, creates flowing curves. There is no need to microwave the bowl—let nature work its wonders. Final hand sanding, oiling, and polishing complete the piece.

*Peter Smith is a turner and photographer in Cincinnati, OH. Photos and drawings by the author.*



Apple bowl, 8 inches in diameter, showing strong rim waves.