

Use a good set of calipers to accurately measure the turned diameter. Then measure from the follower tip to the centerline of the template (Figure 13-24). If the alignment is correct, this distance will be exactly one half the diameter of the turning. If not, make any necessary adjustments before proceeding. For very critical work it is a good idea to make a practice turning from scrap stock to verify the setup before turning the actual project pieces. Note: The tailstock chuck arbor is useful for drilling mating holes for joining two or more turnings. Refer to Chapter 12.

Parting Cuts

After all turning and sanding on the lathe has been completed, remove the turning from the lathe and use a bandsaw or coping saw to trim off the scrap at the end of the workpiece. **Warning: Do not part the stock completely on the lathe.**

If you wish to cut a square shoulder where the stock will be parted, use the square cutter or reverse the mounting of the triangle cutter and use its side.

FACEPLATE TURNING

Faceplate turnings are made with the stock mounted to a faceplate which is attached to the Mark V main spindle. Follow the instructions in Chapter 12 when mounting faceplate turnings.

Warning: Make sure the workpiece does not have loose knots, splits or defects. Use #12 x 1-1/4" or larger screws to attach the stock to the faceplate. Allow glue joints to dry for at least 24 hours and cut the stock round on the bandsaw before turning.

Setup

All faceplate turning should be done at the far right end of the Mark V. Remove the right-hand template support. Move the table as far to the right as it will go and reposition the power plant and left-hand template assembly.

Mount the template in the template assembly with the edge of the template firmly seated against the spacer in the clamp. Then tighten the two setscrews to hold the template securely. Accurate align-

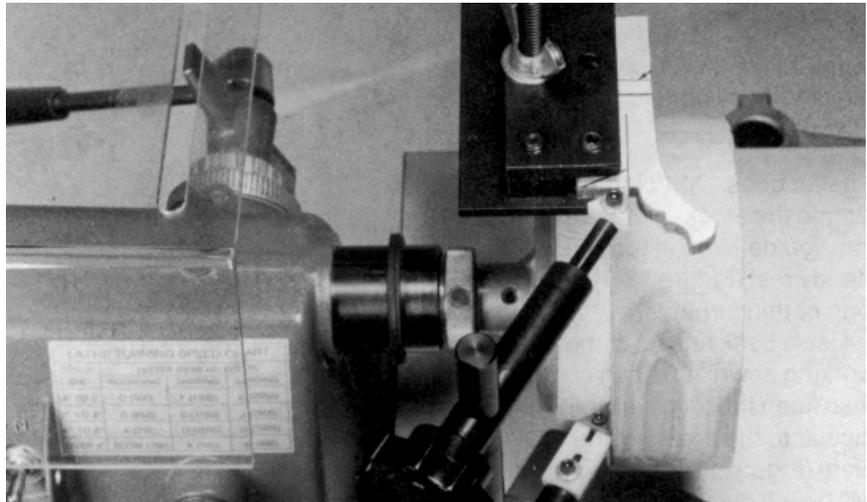


Figure 13-25. The template end line should be inside the end of the workpiece.

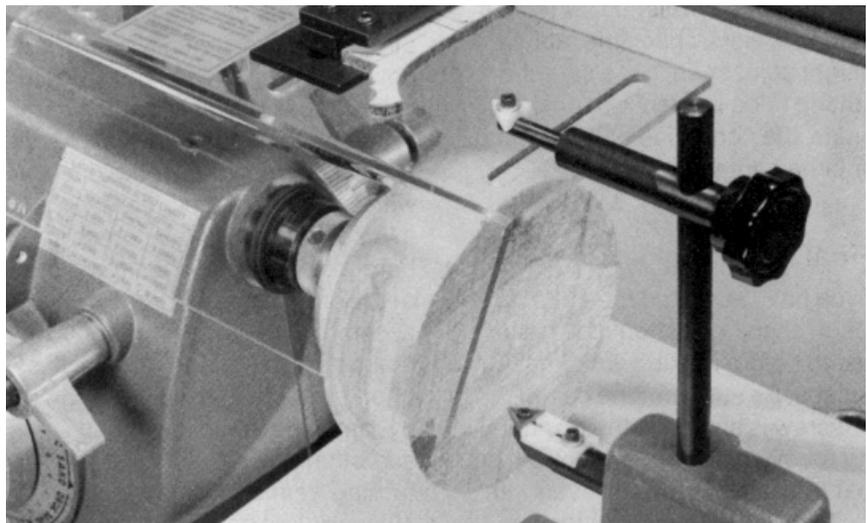


Figure 13-26. Setup for faceplate turning with the guard extending over the workpiece.

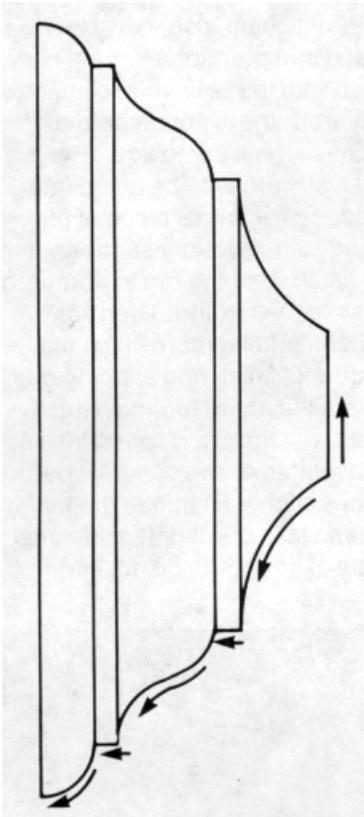


Figure 13-27. Work “uphill” on beads and covers; “downhill” from sharp shoulders.

ment of the template is extremely important to assure accurate diameters and eliminate unplanned tapers in the final turning.

Loosen the template bracket screw and position the template over the workpiece. Use the tool rest assembly as an alignment gauge to be sure the end line on the template is inside the left edge of the workpiece (Figure 13-25). Tighten the template bracket screw.

Finally, mount and adjust the guard (Figure 13-26). **Warning: The brackets should be attached to the left and center slots of the guard and the guard should extend from the power plant over the workpiece.** Adjust the guard so it is as close to the workpiece as possible and just high enough for the cutter to pass freely underneath it.

Rounding

Turn on the Mark V and set the speed dial to the proper speed. Grasp the handles of the tool rest assembly. **Warning: Do not extend your fingers beyond the front edge of the base.**

Begin rounding the outside edges, working in small areas at a time, until the workpiece is completely rounded. Then, if the right-hand face is rough or not parallel with the faceplate, move around to the end of the machine and straighten this face.

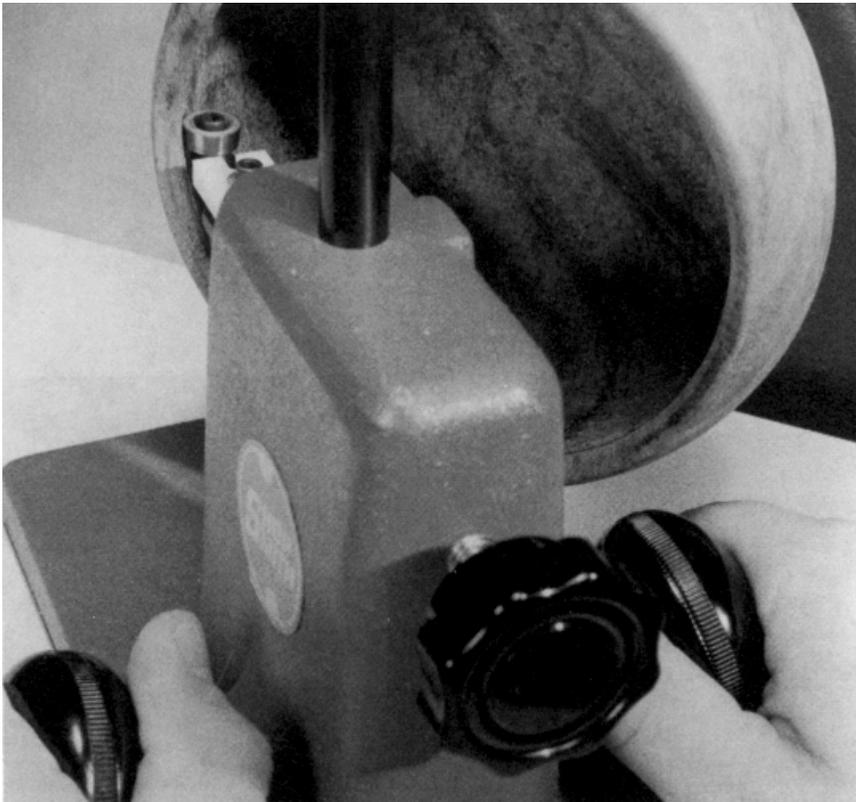


Figure 13-28. Undercutting the inside of a bowl.

Rough Shaping

The techniques for rough shaping faceplate workpieces are very much like those for spindles. Work in small areas, beginning with the larger diameters. The cutter may be retracted to leave some stock for final detailing.

If you are cutting properly, you will see large chips. As the profile takes shape, these chips will become curled shavings often several inches long.

Generally you should rough shape the outside profile and then begin rounding the inside contour. The exception is when you are working on a project—such as a thin walled bowl—where two templates or two centerlines are required for the outside and inside profiles.

In these cases, it is usually easier to continue with final detailing of the outside profile before beginning on the inside. This will eliminate having to reposition the templates for final shaping. If repositioning will be necessary, drill the 1/4" alignment hole (Figure 13-15) before removing the template and be sure the setscrews return to exactly the same in-dentions in the template.

Final Detailing

Reposition the cutter if it has been retracted and begin cutting with a light touch. Work "uphill" on beads and coves, but "downhill" when shaping from the top of a sharp shoulder into a round profile (Figure 13-27).

Undercutting

Undercutting involves cutting an inside diameter that is larger than the opening. This is quite common in salad bowls and similar projects where the middle is wider than the top or bottom,

The free-floating tool rest lets you make undercuts with only minor limitations (Figure 13-28). First is the limit of the cutting angle you can achieve before the tool rest base runs into the turning. Second is the depth of the undercut before the lip of the turning begins to rub on the underside of the cutter support. These limitations are reduced as the size of the turning increases. In some cases, you can increase the undercut by extending the cutter support up to one inch and making light passes freehand.

PRODUCTION TIPS

If you are making a number of spindle and faceplate turnings, these tips will help speed up the job and eliminate needless work.

- Complete each operation on all pieces before moving to the next. For example, prepare all the stock, make all the turnings, plus sand and finish all the parts.
- Mounting three or four turnings on extra faceplates will be faster than removing and remounting each piece.
- When using different cutters for rough turning and final detailing, rough

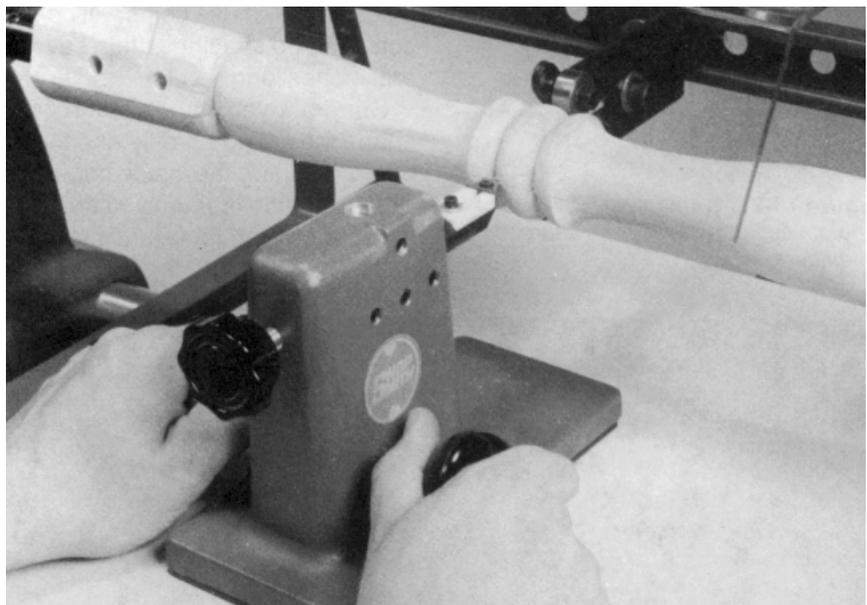


Figure 13-29. You can do freehand turning with the lathe duplicator.

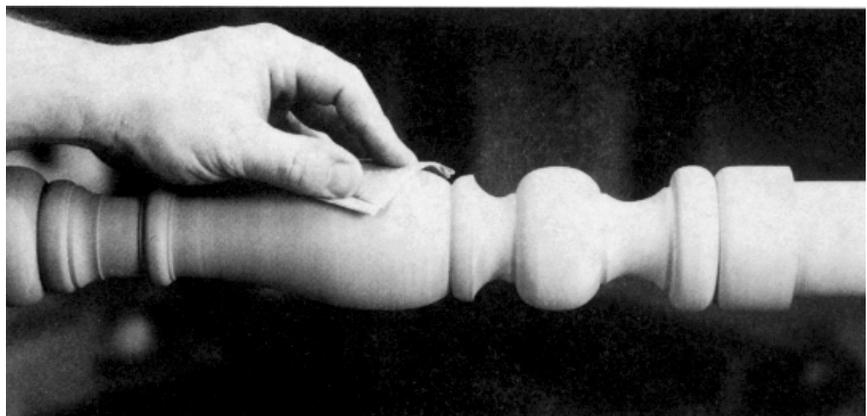


Figure 13-30. When you sand on the lathe, fold quarter sheets of sandpaper into thirds to protect your fingers from the heat build-up.