

You can do this kind of work on pieces that are too long for the standard shaper fence by making special long fence boards like the standard fence boards.

Slim Moldings

Warning: Trying to form slim moldings by working on narrow pieces of wood is a dangerous practice. To make slim moldings, shape the edge of a large workpiece and then, working with either a hollow-ground or carbide-tipped saw blade, cut off as much as you need. This technique is also valuable because it enables you to form moldings you would otherwise have to buy (for example, half-rounds); and you can form the moldings in whatever kinds of wood you choose, an option not available through commercial supply houses.

Figure 9-23 shows the start of such an operation using the nosing cutter that is part of the flute and nosing set. After the edge is shaped, the half-round is removed by sawing (Figure 9-24).

Shaping Cross Grain

Cross-grain cuts are seldom as smooth as those made with the grain. To get the best results, use a very conservative feed rate and keep the workpiece moving steadily. If the cuts are deep, make more than one pass, adjusting the cutter after each pass until the shape is fully formed. Warning: If the workpiece is not wide enough to have sufficient bearing against the boards, use the miter gauge and safety grip to secure the workpiece while making the pass (Figure 9-25).

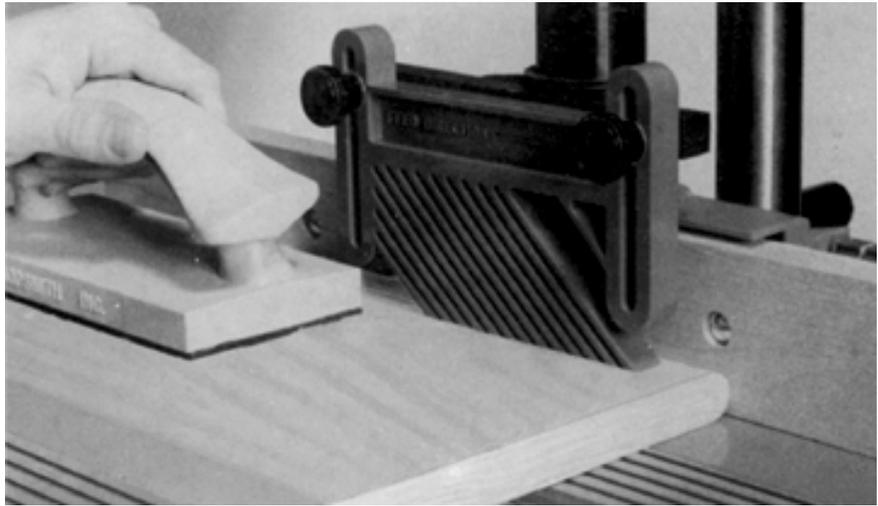


Figure 9-23. The nosing cutter of a flute and nosing set of cutters is used here to round off the edge of a workpiece.

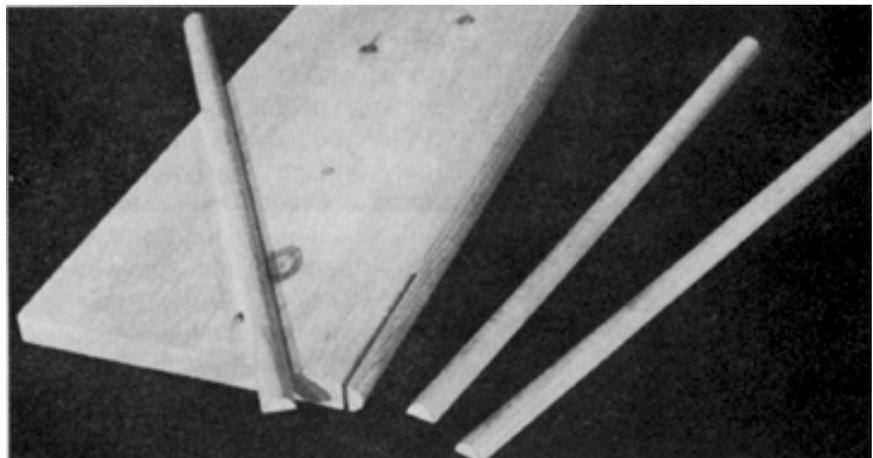


Figure 9-24. When the edge of the workpiece is sawed off, you have perfect half-round moldings.

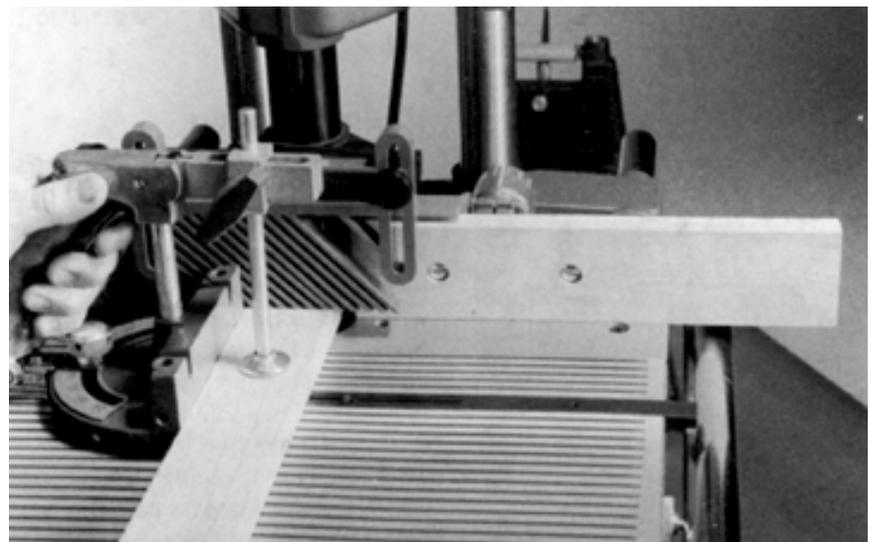


Figure 9-25. Unless the workpiece is wide enough to provide sufficient bearing surface against the fence boards, make all cross-grain cuts with the miter gauge and safety grip.

If you are shaping a square corner, always make the cross-grain cut first. The second cut, made with the grain, will remove the slight blemish that is inevitable at the end of cross-grain cuts.

When you must shape all four edges of a workpiece, do the cross-grain cuts first, then the final cuts with the grain (Figure 9-26).

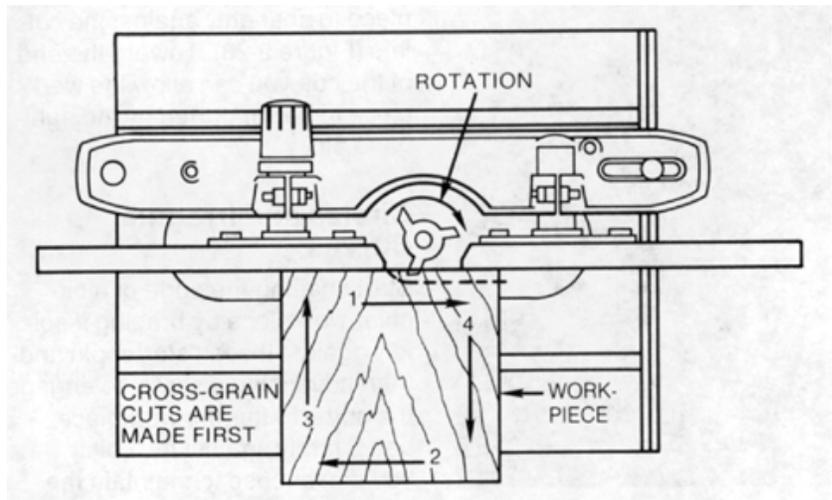


Figure 9-26. Make the cross-grain cuts first when shaping all four edges of a workpiece.

PIN SHAPING

Workpieces that are circular or have curved edges are done by pin shaping. This is a special procedure made possible by mounting collars on the arbor and using the shaper insert equipped with pins.

The collars, the pins and the table provide the bearing surfaces for the workpiece. The cutter may be over the workpiece or under it. You can use more than one collar of the same diameter to guide against thick stock. **Warning:** The important factor is the contact area between the workpiece and collars (Figure 9-27). A small amount of contact area (less than half the collar thickness) is not adequate; always organize for maximum collar contact so the work will have good support.

Since the collars turn with the cutters, they can score or burn the Work unless they are kept smooth and free of gum, dirt, or dust. When you bear against them, use only as much pressure as you need to maintain the contact.

The cutters will function whether they are over or under the workpiece. The cut is easier to see and, some operators feel, is easier to control when the cutter is on top. **Warning:** If the workpiece is tilted up at any time during the pass, the cutter will dig into it. Positioning the cutter under the workpiece is the safest way to operate. Also, slight accidental lifting of the work during the pass will do no harm.

Basic Procedure

The major factor to consider when pin shaping is the initial contact of the workpiece with the cutter. **Warning:** The workpiece, if moved directly into the cutter without support, will be kicked back. This is where the pins come into play.

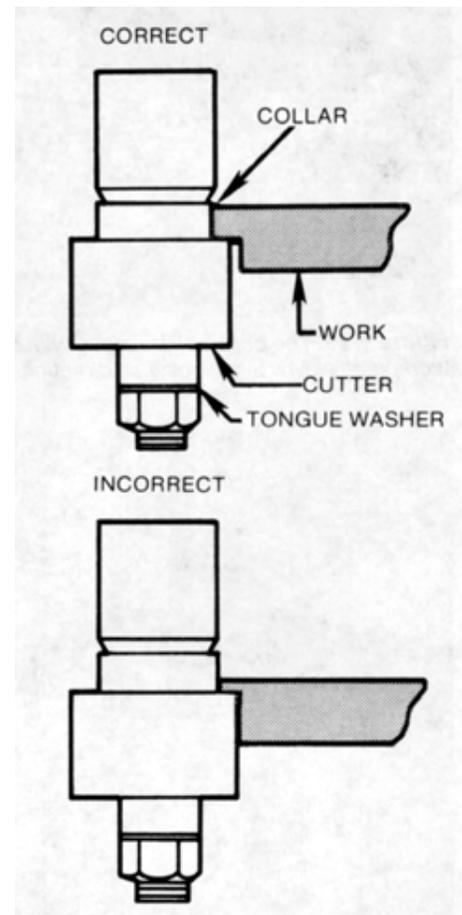


Figure 9-27. Collars control the depth of cut. Always be sure there is enough bearing surface between the workpiece and the collars.

Start the pass by bracing the workpiece against the pin at the left of the cutter. With the workpiece firmly against the pin, slowly advance it to contact the cutter until it is solidly against the collars. Once the cut is well started, you can swing free of the left-hand pin and allow the workpiece to bear only against the collars (Figure 9-28). Toward the end of the cut, you can allow the workpiece to be supported by the right-hand pin.

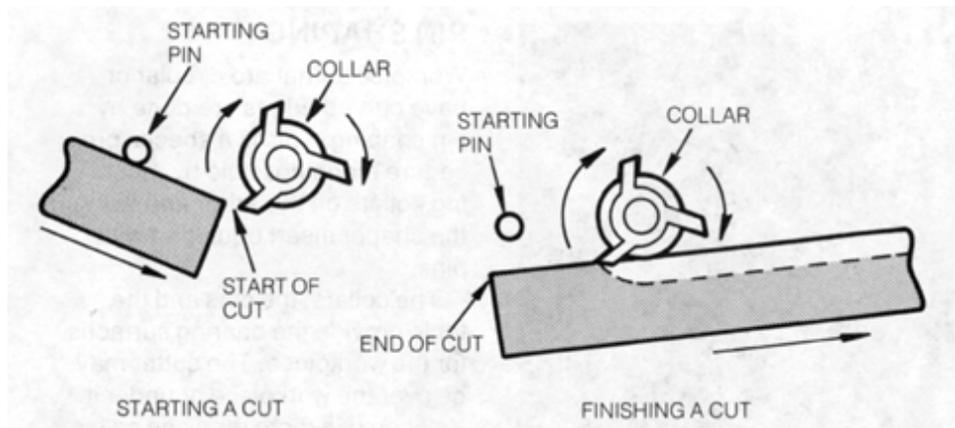


Figure 9-28. The workpiece is first braced against the left pin and slowly advanced to contact the cutter.

Circles and Irregular Curves

Start shaping the edge of a circular workpiece by bracing it solidly against the left starter pin and then advancing it slowly to engage the cutter. After the workpiece bears firmly against the collar, you can choose to maintain the pin contact as you turn the workpiece clockwise (Figure 9-29) or swing it clear so only the work-to-collar contact is maintained. You can continue in this manner to complete the pass or, at the end of the cut, allow the right-hand pin to support the workpiece.

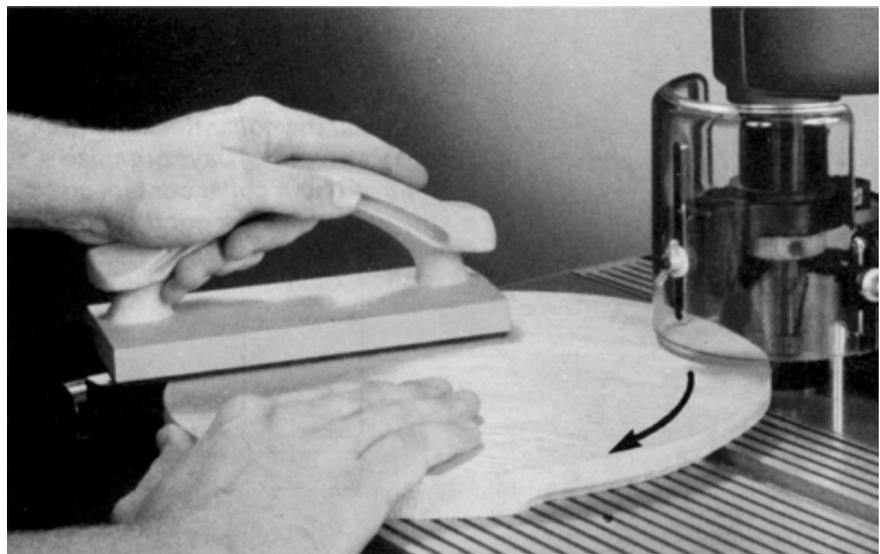


Figure 9-29. The pass can be made with the workpiece against the collar. Move the workpiece slowly in a clockwise direction.

Irregularly curved edges, such as those on fancy picture frames, wall plaques, free-form tabletops, and so on, are shaped much like circular pieces except that you should judge when to accept support from the left-hand pin and when to allow the workpiece to bear only against the collar (Figure 9-30). Always start by bracing the workpiece against the

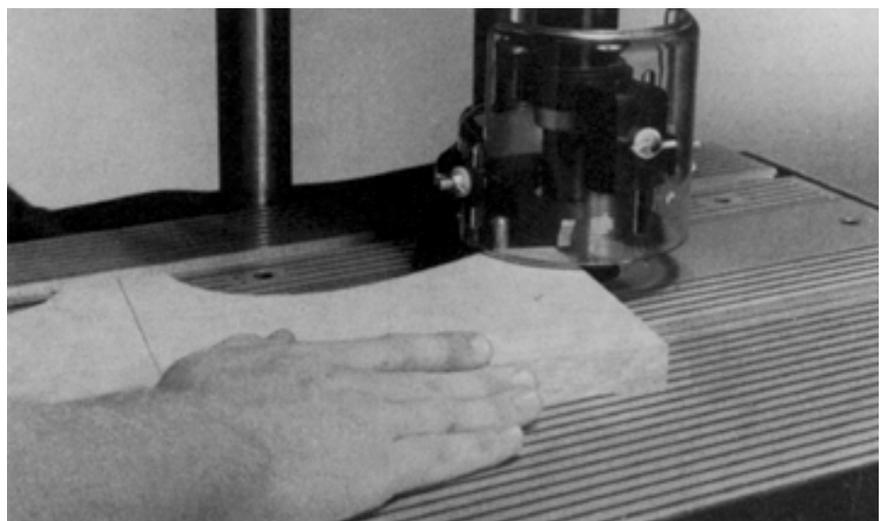


Figure 9-30. The left-hand pin comes into play when shaping irregular edges. Be very careful when shaping small radii and sharp corners.