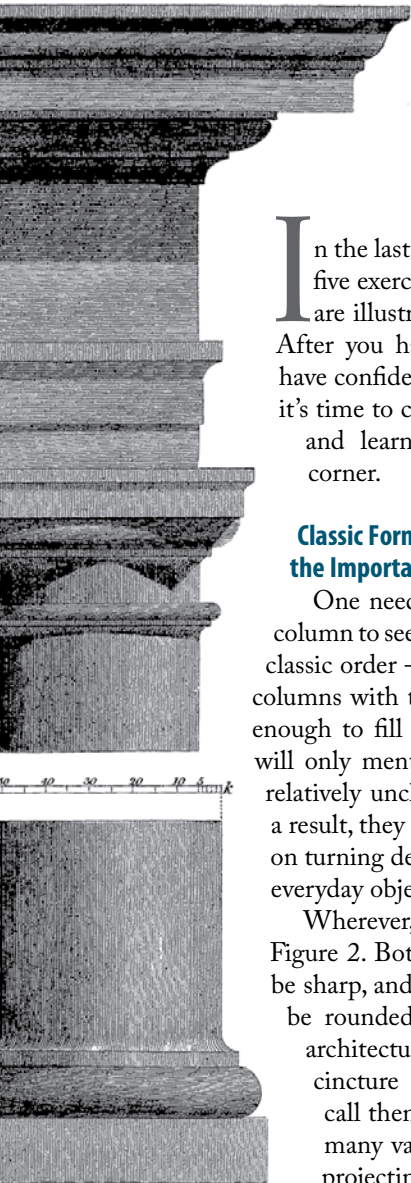




getting down to details

Classic Design



bead — shoulder — cove

In the last article (Sept '07), we went through five exercises for turning basic shapes. These are illustrated in simplified form – Figure 1. After you have practiced these sufficiently to have confidence in your ability to execute them, it's time to combine the skills you have learned and learn how to make a perfect inside corner.

Classic Forms & the Importance of the Inside Corner

One need only look at the base of a classic column to see the fundamental application of the classic order – bead, shoulder and cove. Turning columns with their appropriate caps and bases is enough to fill another article or two. For now I will only mention that these designs have been relatively unchanged for thousands of years. As a result, they have exerted tremendous influence on turning designs in architecture, furniture and everyday objects.

Wherever, it presents two distinct lines – Figure 2. Both inside and outside corners must be sharp, and the outside in particular must not be rounded by careless sanding. In classical architecture, the narrow band is called the cincture and is always flat. Woodturners call them shoulders or fillets, and there are many variations in form – Figure 3. If the projecting details are too sharp, they are



apt to be fragile and may be broken by normal wear and tear.

First Step: Make Room

Careful planning in the roughing out stage will lead to efficient finishing of the inside corner. The pair of illustrations show two plans of attack. Plan A, is the most direct approach – Figure 4. First, leave sufficient material for the width of the shoulder. Second, you must get to a depth that is deeper than the height of the shoulder. This is what I call the “make room” step. Plan B is best for beginners – Figure 5. It involves making parting tool

cuts at the location of the shoulders. After roughing out with the gouge, the shoulder may remain slightly protruding. This diameter is easy to check with a caliper that is set $\frac{1}{32}$ " to $\frac{1}{16}$ " oversize to allow for finishing – Figure 6.

Forming the Inside Corner

The previous article explained how to make a vertical cut to slice the end grain with the point of a skew chisel. This is referred to as the shoulder cut. The next step involves cutting sideways with the heel of the chisel to meet that first cut exactly. I'm sure you realize

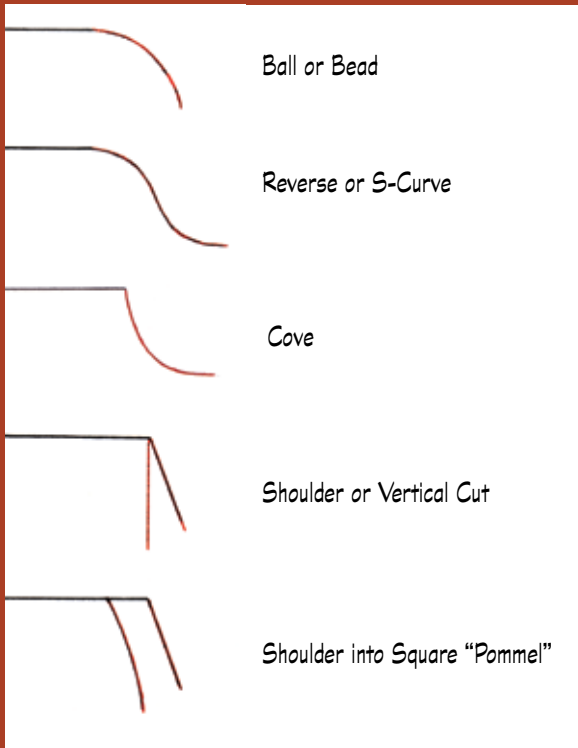


Figure 1 – Five basic shapes to practice – see the Sept '07 issue of *The Old Saw*

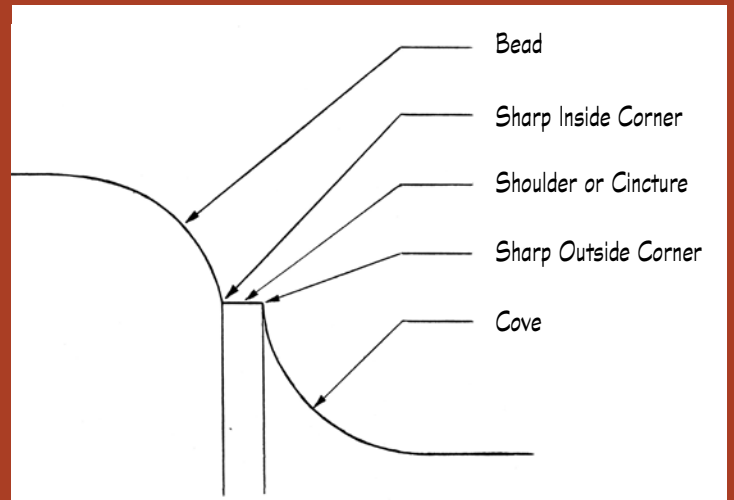


Figure 2 – A narrow band is used to break a curve into separate convex and concave segments

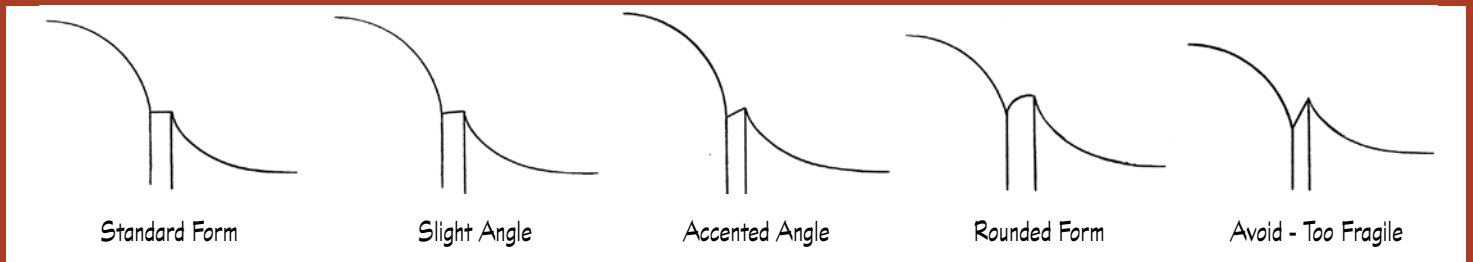


Figure 3 – Variations of the shoulder or cincture

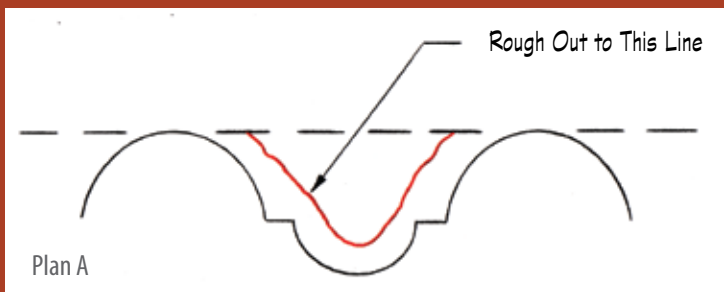


Figure 4 – Plan A is the most direct approach

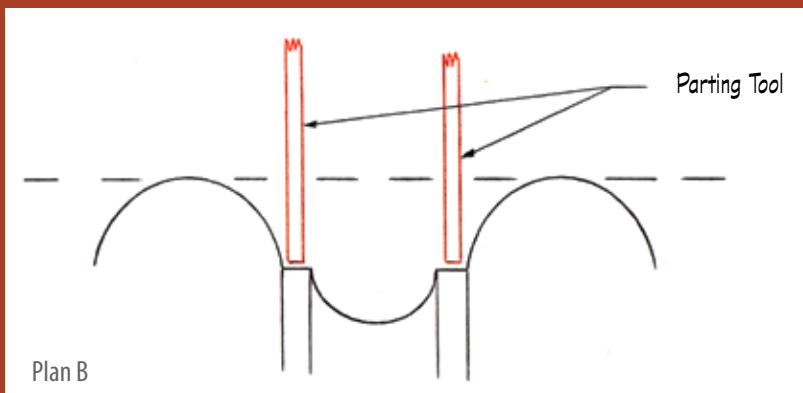


Figure 5 – Plan B is best for beginners

Figure 6 – After roughing with a gouge, check the diameter of the shoulder with a caliper





Figure 7 – Make a sliding entry from the top with a gouge . You can form the entire bead with the gouge, but the inside corner will not be sharp.



Figure 8 – Slice through the grain holding the skew chisel almost vertically. Round chisels, as shown here, work well for small details.



Figure 9 – Enter with a skew chisel from the side and make a planing cut.



Figure 10 – The accurate placement of the gouge establishes the width of the shoulder.

why it is essential to make the vertical cut first. This acts like the spur on the side of a rabbet plane or dado blades when used for cutting across the grain, sometimes called scoring. The vertical cut must be deeper than the planing cut, but this difference may be so small as to be unnoticeable.

There is much discussion in woodturning literature about rounding beads with a skew versus a gouge. I like to round the tops of beads with a gouge (Figure 7) and finish the inside corner in a second operation with a skew. You may decide to do more or less of the bead with a gouge, but at some point after the diameter of the shoulder has been established with a caliper, you must use a skew in a nearly vertical position to slice into the end grain – Figure 8. This is in preparation for the second cut from the side which will meet it exactly.

Entering from the Side

In the last article, I discussed piercing entry cuts. This involves bringing the point of the chisel into contact with the work without the benefit of the bevel being in contact first. These cuts require the chisel to be placed at a precise position to enter the wood without creating a catch. In this case the skew chisel is held with the bottom bevel horizontal to make a planing cut and enters from the side. To ascertain the correct angle to hold the chisel, place the bevel on the rough shoulder, and draw back the skew until the edge just starts to engage. Then move off to the side and make the entry at a slightly

lower point – Figure 9. Proceed until the heel of the skew meets the previous cut. Sometimes you will hit the right diameter the first time, but often a few very light cuts are required to get the inside corner to look clean. If you go too far, a large amount to fuzz will appear right in the corner, which will not come off. Unfortunately, it is then necessary to make an additional vertical cut somewhat deeper, and an additional shoulder cut to meet it.

The Cove

The final stage is the formation of the cove. Here the piercing cut is executed as described in the previous article, and the width of the shoulder is thus established – Figure 10. When first learning the piercing cut, err on the safe side. Tilt the edge of the chisel toward the open space, so if you do get a catch, it will run into the space and not toward the finished shoulder. If it does run, straighten up the edge a little and try again.

Conclusion

The classic shape of bead-shoulder-cove is ubiquitous in turning. Every woodturner will develop a system for doing this form and it becomes routine. There may be some difference in how the gouge or the skew – or the type of skew – is used, but always start at the top (that is, the middle of the bead) and work down in stages to the bottom of the cove. ■