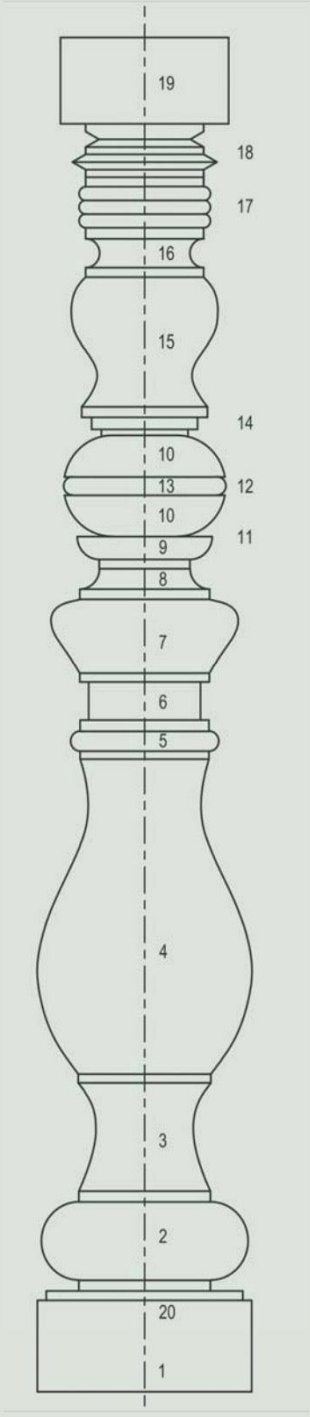
Demonstration notes

1. Spindle work.
    - Use dry woods. A green spindle will not rustically become oval, but it will often crack.
    - Spindle grain orientation should all be parallel to the lathe ways, grain runs between the head stock and tail stock. Mounting a piece perpendicular to the ways is called bowl orientation. Trying to turn a spindle piece with a bowl orientation can be dangerous, as the side grain gets thin it is weak and will break.
    - Always cut downhill. Imagine the grain as a bundle of straws.
    - Be aware that you will be making large motions at the back of the tool to get small changes at the cutting edge.
2. Spindle tools.
    - Spindle Roughing Gouge. Used to take a blank from square to round and form the basic shape. Not for use on bowls or non-spindle work. The tool tang is small and too weak to risk a catch in endgrain.
    - Bowl Gouge(s). Fine for spindle work as the strong edge stands up to cutting. The drawback is that the sharpening angle is too blunt (50 to 60 degrees) to get into the detail spaces often found on spindles. Bowl gouges have deeper flutes than spindle gouges.
    - Spindle Gouge(s). These gouges have a more shallow flute than bowl gouges and are ground at a more shallow angle (45 degrees). Detail spindle gouges have progressively shallow flutes and sharpening angles (to as little as 20 degrees in extreme cases), and are for very tight complex work and finials.
3. Turning mechanics.
    - Spindle work is foundational to turning. There is a reason apprenticeship programs historically had new turners on spindle work for at least one and potentially three years.
    - In the simplest terms spindles are mostly beads and coves. For the non-simple term see the attached illustration.
    - You are doing four things simultaneously. Once the tool is in the initial position to cut then you shift your body, rotate the tool, swing the handle, and raise the handle at the end.
    - Footwork. You still start with A,B,C,D (Anchor – Bevel – Cut – Dance). But the Dance portion has a fair bit of body and tool movement. So figure out what position you need to finish in and start with your feet there.
    - Hand grip. It is necessary to rotate the tool in the cut. But if your palm is on the bottom of the tool handle it is not possible to rotate it to the right (clockwise). So if you are cutting to the right start with your hand on top of the tool handle.

4. Cutting a bead. Mark out the bead. Draw the center line (highpoint) and cut fillets or start relief cuts on either side of the bead. Check your foot and hand placement.
    - Starting on the right side of the bead (arbitrary – left would do as well) begin a series of cuts to end up as your round bead. Figure out your hand and foot placements.
    - Start with the tool at 12 o'clock (flute pointed straight up) find the bevel.
    - Begin cutting. Start sliding your body to the right, rotate the tool from 12 to end at 3 o'clock. While doing this you also have to swing the tool handle to the right in order to keep the bevel floating along the curve of the bead. Plus as you approach the end of the cut raise the tool handle to have the cut go to the center axis.
    - Repeat on the left side. You will be sliding and swinging left and the tool rotates from 12 to 9 o'clock.
5. Cutting a cove. Largely the same thing as a bead, only in reverse.
    - Mark out the cove and make any measuring cuts (i.e. depth of the cove and fillets where appropriate). Need not be full depth, this will function as a relief cut so you are not cutting uphill.
    - Check your foot and hand placement.
    - Starting on the left of center so you are cutting toward the right make a series of cuts. Only cut to the center of the cove (or just beyond). No going uphill.
    - Tool at 3 o'clock bevel pointed straight in to the axis. Note that if the bevel is not at 90 degrees to the axis the tool WILL skate off to the left.
    - Start cutting by leaning to the right as you start rotating the tool to 12 o'clock and swinging the tool handle back to the right. Lower the tool handle to end the cut.
6. Next steps.
    - After you conquer turning beads and coves you can work to extend your mastery of tools to the skew chisel, bedan, English beading and parting tool.
    - Multi-axis turning can be interesting. It can provide truly unique shapes to spindle work, or form a three sided tool handle.
    - Making multiples or limited production runs. Make a story stick to mark out all the elements. You can get away with beads and coves not having the same shape if they all start/stop at the same place.
    - Cutting a line in to start a cove. If the tool is exactly on its side and the handle is raised a bit to engage only the very tip you can cut a line. The tiny lip on that line is enough of a bevel to begin cutting a cove with less swinging action.

Steve Reynolds

stephen-reynolds@sbcglobal.net



SPINDLE TERMINOLOGY

1.	PLINTH	Large straight sided base
2.	TORUS	large semi-circular shape
3.	SCOTIA	Sunk in ovoid
4.	OGEE	"S" shape usually asymmetrical (large bulge below is Ogee (cymarecta)
5.	ASTRAGAL	Semi-circular form (smaller than a Torus)
6.	NECK	Straight section in upper area
7.	OVOLO	Protruding segment of an ellipse
8.	QUARTER	Hollow (concave)
9.	QUARTER	Round (convex)
10.	BALL	Can be elongated into an ellipse
11.	QUIRK	Transition between elements 9 & 10
12.	FLAT	end of the quarter round
13.	BEAD	beads are cut into surface (astragal protrudes above)
14.	FILLETS	3 stair stepped in reverse
15.	OGEE	large bulge above (Ogee, cyma-reversa)
16.	CAVETTO	cove semi-circular hollow
17.	REED	uniform series of beads, 3 or more.
18.	"V cut"	straight sided cut - positive or negative.
19.	ABACUS	straight sided section at top
20.	SCAMILLUS	secondary block or plinth, smaller than the plinth & without moulding.