

Turning Furniture Parts

Part 2: For smooth surfaces and intricate elements, a little practice makes perfect

BY PETER GALBERT

1 SMOOTH A CYLINDER

A step-by-step tutorial

After learning to make perfect cylinders and tapers, Galbert's students learn more intricate cuts by running through a series of short exercises on scrap or firewood. By cutting the key shapes over and over, they develop confidence and muscle memory. It also is easier to see and fix errors in technique when you make the same mistake a few times in a row.

2 CUT V-NOTCHES

3 PRACTICE BEADS

4 PRACTICE COVES

5 PUT IT ALL TOGETHER

One thing furniture makers don't realize when they approach turning is that the smooth surfaces, sharp notches, and lovely beads and coves they covet all take a bit of practice. The great thing about a practice session is that you don't have to fret over making something precious.

The basic drills in this article will teach you the subtleties involved in planing a surface smooth, plus cutting the precise notches, beads, and coves seen in traditional furniture parts. Master these cuts in practice and real furniture spindles will be a breeze.

Like I did in Part 1 (*FWW* #231), I'll demonstrate some techniques that the usual sources neglect to explain, such as how to adjust your footwork and grip to put the tools and your body in the most comfortable position.

You won't need as many tools as you think. Furniture work requires only four tools, a roughing gouge and parting tool, plus an oval skew chisel and spindle gouge that have been specially reground and honed (see Fundamentals, also in *FWW* #231).

For the skill-building exercises in this article, you'll need blanks

12 in. to 18 in. long that have been roughed down to 2¼-in.-dia. cylinders, as you learned to do efficiently in Part 1.

Planing with the skew chisel

Although planing all of the flat surfaces with an oval skew chisel is typically the last step I take in turning a spindle, it's one of the first skills I teach novices because it's simple to learn and develops a feel for the tool. The key is learning to balance the bevel of the tool on the spinning workpiece and rotate/angle the edge as needed to take whisper-thin, even shavings and leave behind a glass-smooth surface. Turners try to minimize sanding, which blunts sharp details.

You'll need to learn to plane in both directions, but there is a more natural direction for lefties (going left to right) and righties (vice versa) to start with when getting a feel for the technique.

Hold the oval skew chisel like a roughing gouge, with one hand bracing the bottom of the handle against your hip. Press the barrel of the chisel against the tool rest with the thumb of your other hand. Keep the edge of the tool at about 45° to the axis of the workpiece with the toe pointed up. That position keeps the bevel bearing on the workpiece, stabilizing the cut.

Engage the blade either by rotating the tool down a bit so the



Exercise 1

Learn to smooth a cylinder

The goal is to plane a roughed-down cylinder until it's glass-smooth and even. Practice moving in both directions, and smooth a number of spindles.



Balancing act.

Galbert braces the handle against his hip and uses thumb-pressure on the barrel to keep the tool in a consistent position (above left). The trick with a planing cut is to ride the bevel of the tool while keeping the cutting action at the center of the edge (left). Avoid cutting with the toe or heel, which can cause catches. The other key is to always be moving forward.

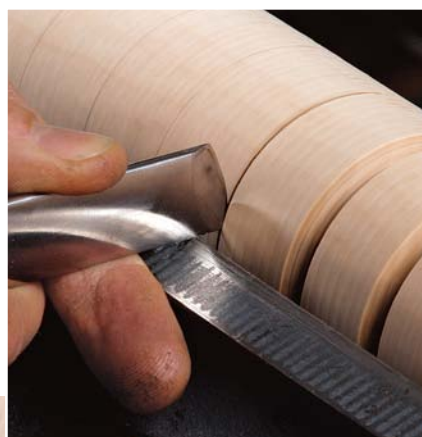
THE OVAL SKEW CHISEL HANDLES BOTH TASKS

The oval-shaped barrel is especially important for planing cuts, making it easier to pivot subtly on the tool rest and find that perfect angle of attack.



curved edge begins to shave, or by swinging the handle up in an arc. In either case, the point of contact with the spindle should stay in the middle of the edge, as high on the workpiece as is comfortable. Staying high on the round limits the depth of cut. With a little practice, you'll find that the skew will cut from any number of positions once you find the right balance between the angle of presentation and the rotation of the tool. Use the same side-to-side movement with your hips and legs that you use with a roughing gouge. This ensures that the edge will move along the spindle in a relatively constant position, making it much easier to cut straight.

To avoid catches, always keep the skew moving forward in a constant, fluid motion, and don't try to cut too deep. Most problems with the skew come from moving backward to get a missed spot. Be content to



Exercise 2

Cut a row of V-notches

The V-notch is the easiest shape to learn, but the trick is to cut one consistently and confidently in three clean strokes.



Start with a relief cut.

Use a chopping motion with the toe of the skew chisel to cut straight into the workpiece (above left). Then cut the side walls. Angle the chisel and follow its outer bevel down into the notch.



Exercise 3

Learn two ways to cut beads

Beads are a fundamental shape in spindle turning. There are two ways to cut them, and each has its advantages. For both drills, start with one of the notched spindles you just made.



SKEW CHISEL IS EASIER

Once you have a handle on planing and cutting V-notches with the oval skew chisel, it's relatively simple to learn to cut a bead with it.

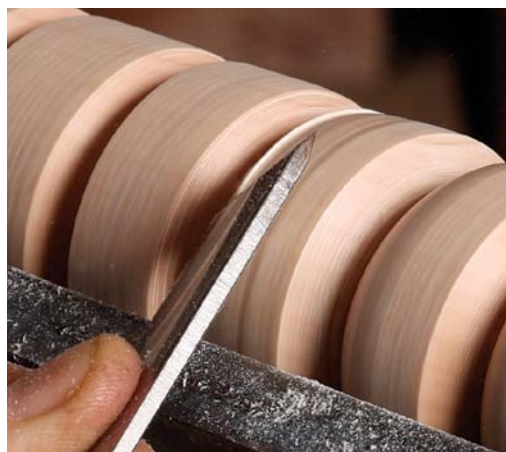
Start at the very corner, and work toward the top and bottom of the bead with each cut.

V-notch is already cut.

Lead with the heel. Begin by taking a small cut on the corner of the V-notch, rotating the heel of the chisel to peel a thin shaving all the way down to the bottom. Remove a bit of wood with each pass.



Pivot from the thumb. Use the tool rest as a fulcrum when slicing through the wood. The motion looks and feels like a planing cut in which you ride the bevel. You'll need to move the handle away from the center of the bead to do so.



simply shave away high spots at first. Subsequent passes will even out the surface. The shavings will become more uniform and continuous once the spindle is straight and smooth. To finish a skew cut, rotate or push the edge back up again so that the edge no longer contacts the round. Don't pull the tool away from the blank or lower the cutting edge; that will deepen the cut and could catch the edge.

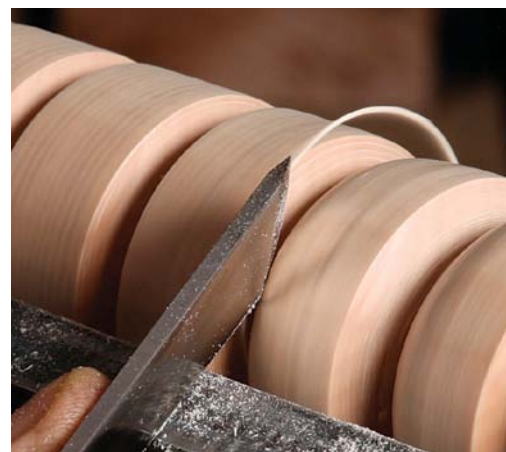
Now try it in the other direction, this time planing away from your body. First use the roughing gouge to rough up your nice surface, and then switch to the skew for planing. It's a little trickier this way for new turners, who often block the handle as they position themselves. Rotate your body close to the lathe. This will let you angle the edge properly, and give you plenty of room to enter and exit cuts cleanly.

V-notches open the door to other shapes

For new turners, V-notches are a gateway because they

serve both as decorative elements and as preliminary cuts for other shapes. Also, the V-notch is the easiest shape to learn—it takes just three short cuts with the toe of a skew chisel. To practice that, make a series of notches about 1 in. apart along one of your practice cylinders. Make a notch and move quickly to the next without recutting or cleaning up the last. The goal is to repeat the gestures until you develop a feel for them, moving seamlessly from one side of the V to the other. After a few blanks, you'll be able to do this handily.

After making the relief cut in the center, rotate the chisel slightly to cut each sidewall. The outer bevel is the one that matters. Line it up with the cut you want to make, and then raise the handle of the tool to slice off a nice, clean ring of wood. If the chisel skitters one way or the other, rotate it in the other direction a bit more and try again. Just as with a planing cut, the skew must constantly travel forward to cut a V-notch without catching. You'll need to sidestep a little and get your torso out of the



Vertical limit. With each pass, you'll start closer to the center of the bead, and finish with the tool more and more vertical until it's close to 90°.

SPINDLE GOUGE IS FASTER

You also can cut beads with a spindle gouge, a tool that hogs out material faster than an oval skew chisel but can leave just as smooth a surface.

Start near the center and go deeper into the V-notch each time.



Righties, start on the left. Start by cutting the left side of each bead (right side of the notch). That motion will be easier for you. Do a whole row.

Now the right. To cut a bead with a spindle gouge, enter the cut near the center and simultaneously roll the tool and ride the bevel down the side of the bead.



Tricky motion. To keep the cutting edge engaged, you'll need to roll the tool sideways while both lifting the handle and moving it sideways.



Finish on the side. The gouge will end up tipped all the way onto its side on your final pass.

way before making the cut that is closest to your body.

Skew can cut beads, too

To cut beads, start with your series of V-notches and use the same tool you've been getting comfortable with, the skew chisel. To develop consistency, practice cutting a row of half-beads along a cylinder that has a V-notch about every inch, and then come back and cut the other half-bead.

To enter the cut, lower the skew until the edge is about to contact the workpiece, then roll the heel of the skew toward the V-notch and lift the handle. Stay in contact as you roll around the bead by moving the handle sideways.

Here's a secret seldom told to new turners: The technique is much easier if you hold the tool so it's most comfortable at the end of the cut. In this case, it's important to keep the skew cutting high on the round, which is easier if you start with your hands in a slightly

unnatural position. Hold the chisel with its toe pointing straight up. Then rotate it back to the starting position without changing your grip. Now you'll always be moving toward a more comfortable grip as you rotate the tool, and your motion will be much smoother.

By the way, I leave a nearly imperceptible flat on the center of my beads, so I have a good starting point for both sides of the cut. I finish it off afterward.

Cutting beads with a gouge

When cutting a bead with a spindle gouge, new turners often find the cutting motion tough to master, because it involves rotating the tool while simultaneously lifting the handle and swinging it sideways along the tool rest. Again, if you do the drill, you'll build the skill.

Start by cutting the left side of each bead, working down the entire row. The handle will swing away from you, which is easier. The process is the same

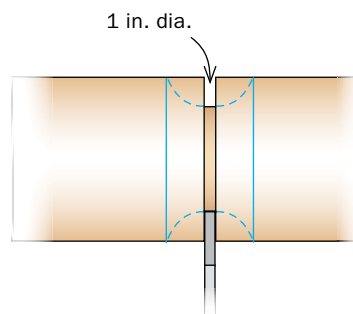
Exercise 4

Cut a row of coves

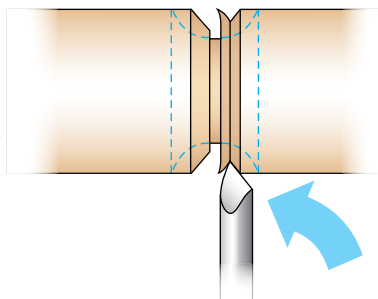
Unlike beads, you can practice coves on a straight cylinder and it's best to cut them one at a time.



Start with a pencil and a parting tool. Mark pencil lines every 1 in. and make notches between them to roughly 1 in. dia. To use the parting tool, start by riding the bevel and then raise the handle to lower the tip.



A few small cuts in the middle. Holding the gouge on its side, take shallow cuts on each side of the parting-tool cut. Enter the cut by rolling the gouge back toward level while pushing it forward in a scooping motion. Keep the bevel of the gouge bearing on the wood as you roll and push.



for cutting right-side beads, but it requires you to step a little farther to the left to get your body out of the way as you swing the handle of the tool toward you.

Back to that turner's secret again, where you start off a little awkward and move toward comfortable. For a right-side bead, this means you should grip the gouge so the flute faces all the way to the right before putting it in position to start the cut.

Cutting coves with a gouge

To cut coves, the concave shapes found in all types of spindles, you'll use the spindle gouge in a maneuver that looks similar to cutting a bead in reverse. As with beads, the choreography is tough to get used to at first. You'll practice cutting two sides from the same position, and the entire spindle will be less likely to vibrate and chatter if it's thinned out in only one place at a time. Lay out the ends of the coves by penciling a line every inch and then get the cove started by using a parting tool to size

the diameter between the marks down to 1 in.

Making a cove cut is like scooping wood out of the spindle, working toward the middle in ever-widening scoops until you reach the pencil line. Finish each cut before you encounter any end grain that's exposed on the other side of the cove, which will cause a catch. Work back and forth, making passes on the right and left until the cove is done before moving on to the next one. As before, it helps to grip the gouge so that your hands are in a comfortable position at the end of the cut. Your body needs to be out of the way, too.

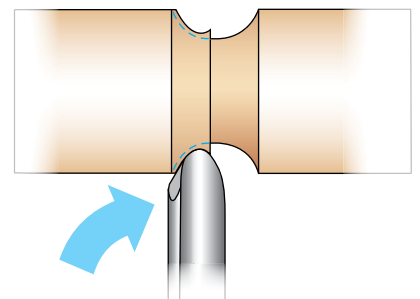
Bring it all together

After practicing the basic shapes, you're ready for a more complicated shape. I have students bring them together into a series of alternating beads and coves, each shape beginning and ending at a crisp shoulder line. Here, the goal is to create consistent shapes and move fluidly from one to the other without



Work toward the pencil lines.

Scoop out the sides of the cove, working from side to side to widen and deepen the shape. Continue feeding the cutter forward to raise it out of the cut.





Exercise 5 Put it all together

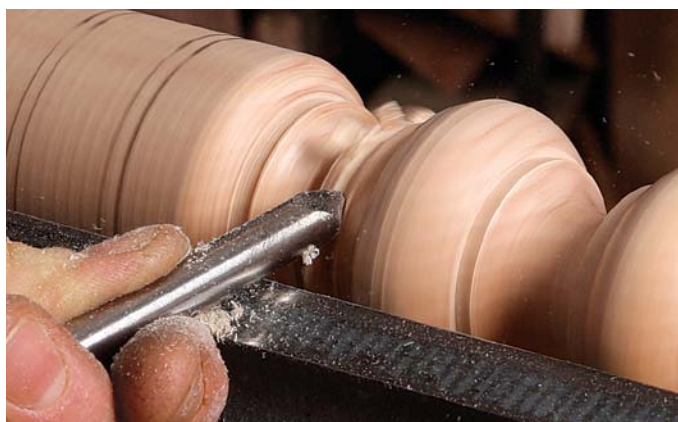
Use another one of your practice cylinders. The goal is crisp transitions between each element.

cutting into the shoulder. For a workpiece, rough down one of the practice pieces from earlier. I tell students to aim for about a 2-in.-dia. cylinder, but being exact doesn't matter, as long as the diameter is consistent and thick enough to leave the bottom cove at least $\frac{3}{4}$ in. thick. Any thinner and the spindle could flex, causing chatter as you cut.

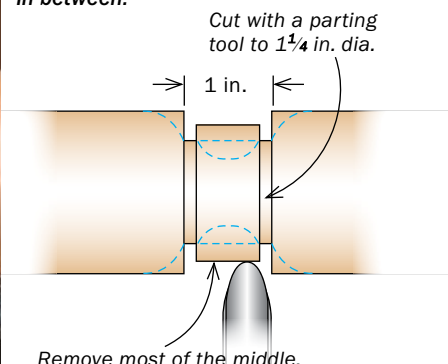
Locate the shoulder lines by making a pencil line every inch, down the entire workpiece. But once again, you will work one section at a time to avoid excessive vibration. That section will consist of a half-bead, then a shoulder cut, a full cove, a shoulder cut, and then a half-bead.

Start each section by cutting a pair of shoulder lines down to $1\frac{1}{4}$ in. dia. Then remove most of the waste between them with the spindle gouge, stopping just before you reach the depth of the shoulders. The slightly proud surface gives a reference point to begin the cove cuts. Cut the beads last, smoothing them with the skew chisel if needed. If your gouge is sharp, they probably won't need it. And remember, it's just practice. □

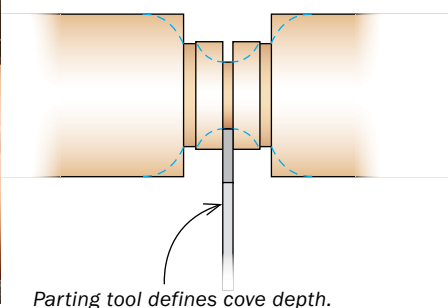
Peter Galbert is a chairmaker in Sterling, Mass.



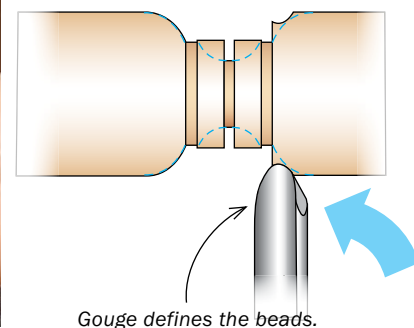
Map out the spindle and excavate. Use two parting-tool cuts to define the shoulders, and the spindle gouge to remove most of the waste in between.



Define the center. Use a parting-tool cut to define the depth of the cove at roughly $\frac{3}{4}$ in. dia.



Beads first. Stick with the gouge, shooting for a clean, sharp transition to the flat shoulder.



Now the cove. To avoid excessive vibration, hollow out this section last. If the beads are rough, plane them a bit with the skew chisel.

