

- **A Heavyweight, Universal Tool Rest** offers an articulated Tool Rest Arm and a massive amount of weight that provides two distinctive advantages to the wood-turner: First, it will allow you to position the actual supporting Tool Rest at virtually ANY position near the front or back of your turning and Second, its sheer mass will serve to hold your Tool Rest firmly in position with unwavering strength, totally eliminating vibrations and chatter during the turning process.
- **Make provisions for additional support**, in the event you'll be turning long spindles or thin diameter stock. The best accessory for this is a Lathe Steady Rest. This device features a pair of adjustable, ball bearing rollers that ride against the back side of your spindle during the turning process to prevent workpiece “whip”, chatter and vibration.

Getting started

Now, we're just about ready to start turning. But before we lay chisel to wood, there are a couple of other simple things we need to do.

- **Get our measuring tools handy.** Once you get started, you'll want to be sure you have a way to measure and gauge your cuts. For this, you'll need **Outside Calipers** (for spindle turnings) or **Inside Calipers** (for bowl or faceplate turnings). These inexpensive items will re-pay their cost many times over in saved turnings.

Another version of these devices is the **Direct Reading Thickness Gauge**. This item includes a integral scale that allows you to view thickness dimensions directly without the need for a ruler or tape measure.

If you're turning intricate spindles or bowls, you could also use a special **Profile Gauge**. These Gauges feature slide in/out “fingers” that can be set to a pre-established shape, then laid against your spindle to check how your turning is matching the desired profile.

- **Use a Face Shield.** This is the preferred mode of eye protection for most Lathe Turners. It features a clear, flip-up / flip-down shield to keep, flying chips and shavings out of your eyes during turning. It is a **MUST-HAVE** item for any wood-turner.

Using your Lathe Chisels

Lathe turning uses one of three different techniques. These techniques are *scraping*, *cutting* and *shearing*.

With *scraping*, the chisel is held at a nearly-flat angle, approximately perpendicular to the rotating spindle. There are a couple of ways to hold the chisel during scraping. Chose the one that's most comfortable for you, then advance the chisel slowly into the rotating stock and move it from side-to-side, making your cut until the desired profile is attained. *Scraping* is the easiest of the three cutting actions and is the best method for beginners to use - although most faceplate turning is performed with a *scraping* action, even by experienced turners.

With *cutting*, the chisel is held with its cutting edge straight into the rotating stock and its handle at a downward angle, the blade resting virtually flat against the angled top surface of the Tool Rest. This action cuts the rotating stock, much like a knife and should not be used by the beginner until the scraping

action is fully mastered. It will leave a surface smooth enough to finish, with practically no touch-up or sanding.

With *shearing*, the chisel is held at a slight angle with its cutting edge tangent to the work. Usually limited to the Skew & Gouge, *shearing* moves the tool's edge parallel to the workpiece with your thumb behind the chisel's edge to steady it while cutting. This process removes the wood very quickly while leaving a very smooth surface. Like *cutting*, *shearing* should only be attempted after mastering the technique for *scraping*.

Making The Sizing Cuts

After you've rounded your stock, the next step is to mark the various diameters of the beads and coves you plan to create on your workpiece. First, mark the locations of the beads and coves by holding a pencil against your slowly rotating workpiece. Next, set your outside calipers for the depth-of-cut you want on your first bead or cove, and use your Parting Tool to make a sizing cut to that diameter in the appropriate location. Change your calipers for the next and all subsequent beads and coves and repeat this sizing cut procedure.

Making The Shaping Cuts

Once you've made your sizing cuts, switch to the appropriate Chisel and cut your beads and coves to the depths of the sizing cuts you made along the length of your workpiece. Use your Skew to round the sides of your beads, then use your Gouge or Roundnose Chisel to create your coves.

More Lathe Turning Projects & Tips

There's a lot more information about specific lathe turning techniques and projects on the Shopsmith website under "Free Woodworking Projects & Articles." Just click on the "Lathe Turning Projects & Tips" link.

What if you need to make more than one of the same turning?

That's when it's time to get your hands on a Lathe Duplicator ...a special device that allows you to create a template (or follow an existing turning) and make as many identical spindle or faceplate turnings as you need, quickly and with assured repeatability.

Duplicators work with a variety of different profiled cutters for making beads and coves. Just mount your turning pattern and workpiece blank to the Duplicator, select the proper cutter and go to work. By tracing the special "follower" over the top-mounted pattern, you'll make an identical cut in your workpiece, mounted below. It's a virtually foolproof process that's both quick and simple.

NOTE: For more in-depth information about using the Lathe Duplicator, visit our January/February, 2001 issue of *Hands-On*, Shopsmith's on-line woodworking magazine at:
http://www.shopsmithhandson.com/archives/Jan_Feb_01/default.htm

Sanding & Finishing

Once your project is turned, you may need to do a bit of sanding, before applying your finish. Here are a couple of “tricks” to make this easier:

- To sand a straight, tapered spindle turning, try using a 12" Sanding Disc as your “sanding block”.
- To sand beads and coves, use a piece of sandpaper, folded over several times to protect your fingers from heat build-up.
- There are some other sanding aids that could make this job simpler for you. Among there are :
 - o Small diameter Sanding Drums, which can be used like your Sanding Disc described above
 - o Abrasive Cords & Tapes, which easily reach into the tiniest coves in spindle or faceplate turnings
 - o Tadpole-type sanders for concave or convex surfaces

Parting The Project From The Scrap

Once everything is shaped and sanded, you'll want to Part the project (in this case, a spindle) from the scrap at each end of your turning. To do this, slow your Lathe way down and use your Parting Tool to gradually make a partial cut at each end of your spindle. Support the spindle by encircling it with your left thumb and forefinger while you move the Chisel into the stock with your right hand (reverse for left-handers), making a cut at each end until you have about a 3/16" diameter piece of stock holding the scrap to the finished turning. At this point, turn off your Lathe, remove your turning and use a small razor saw to sever the scrap from your finished turning.

The Importance Of Sharp Chisels

No article about Lathe Turning (or any other woodworking function, for that matter) would be complete without some mention of how important it is to always work with sharp tools. Dull tools not only compromise your results, but could jeopardize your safety, as well. This is especially true of Lathe Chisels. Dull Chisels can easily snag a turning, causing personal injury...or, at the very least, producing a rough or ragged surface that's less than attractive.

So, how do you sharpen Lathe Chisels? If you're a Shopsmith Power Tool Owner, there are three excellent options:

- The first is the Shopsmith Sharpening Guide Kit. It mounts quickly and easily to the surface of your MARK V's Extension Table and comes with complete instructions for using your 12" Sanding Disc to achieve the sharpest possible edges on all of your Lathe Chisels.
- The second option is the Shopsmith Grinding Wheel Guard and Wheels.
- The third is Shopsmith's Strip Sander Chisel Sharpening Attachment.

Other sharpening options include the use of special Gouge Slip Stones for curved gouges and Roundnose tools small, combination slip stones for smaller sized straight and round-edged chisels or flat combination stones for straight-edged chisels.

So, there you have it. The basics of Lathe Turning, in a nutshell. For more about working with the Lathe, get a copy of Shopsmith's authoritative woodworking text, *Power Tool Woodworking for Everyone*. It's jam-packed with great tips and techniques for working with one of woodworking's most enjoyable tools.