Shopsmith Woodworking Academy Notes

The Ins And Outs Of Using Woodturning Chisels

We're often asked...."What lathe chisels do I need to get started in wood turning and how is each used?" Well, the answer is...there are literally hundreds of specialized lathe chisels available from dozens and dozens of different manufacturers. Many are designed for highly specialized applications such as super-large or super-small projects, extremely deep turnings, turning the insides of vases with very small openings...the list goes on and on.

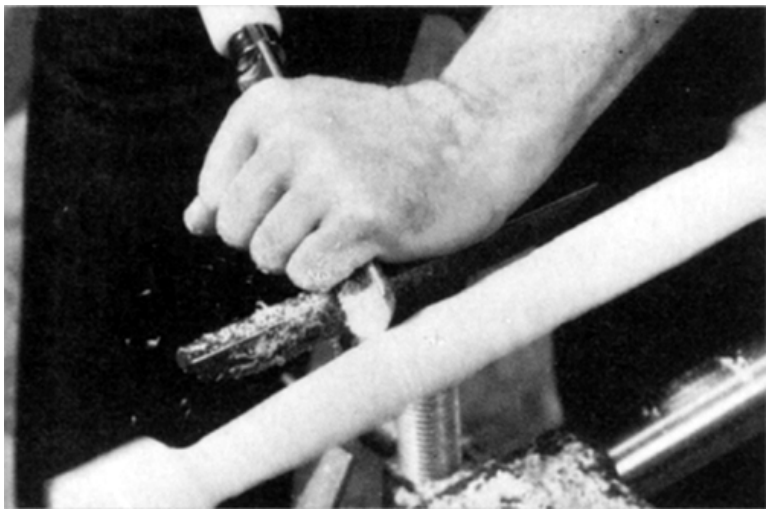
The Five Most Important Lathe Turning Chisels

For those of you who may just be getting started, we recommend Shopsmith's basic 5-Piece Lathe Chisel Set. It includes a 1" Skew Chisel, a 1" Gouge, a 3/8" Gouge, a 1/2" Roundnose Chisel and a 1/2" Parting Tool. This set will easily handle all of your basic wood-turning needs...until you start turning more specialized projects.

We'll recommend some additional sets for specialized operations later...but first, let's talk briefly about some basic turning techniques.

Rounding The Stock

Two different types of Gouges can be used to round your stock...long or short bevel gouges. Generally, roughing-out gouges have extremely short (steep) bevels. Although they may be slightly better for roughing-out, the longer bevel Gouge in Shopsmith's Basic Set is a better, all-around choice for roughing-out as well as other cove-cutting operations.

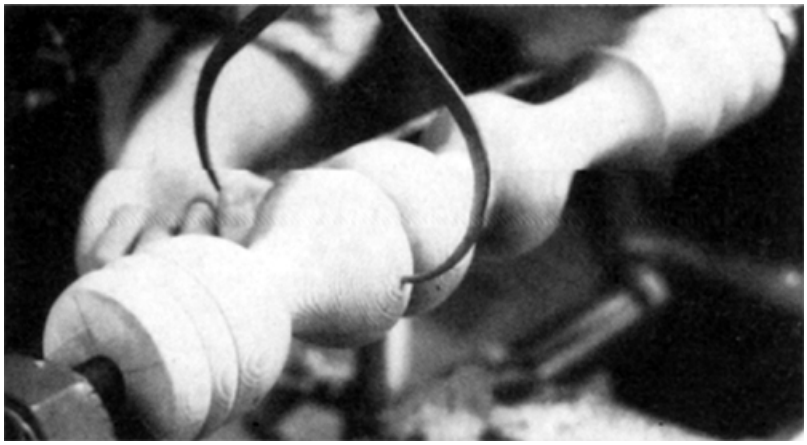


Either type is best used by holding the chisel perpendicular to the workpiece and slightly rotated to about 10 to 15-degrees. You may either use the cutting edge across the stock...or by "leading" the cut with the chisel's beveled edge.

Making your initial sizing cuts

Once the stock is rounded, “size” it by marking the locations of the various bead (hill) or cove (valley) diameters with a pencil and ruler.

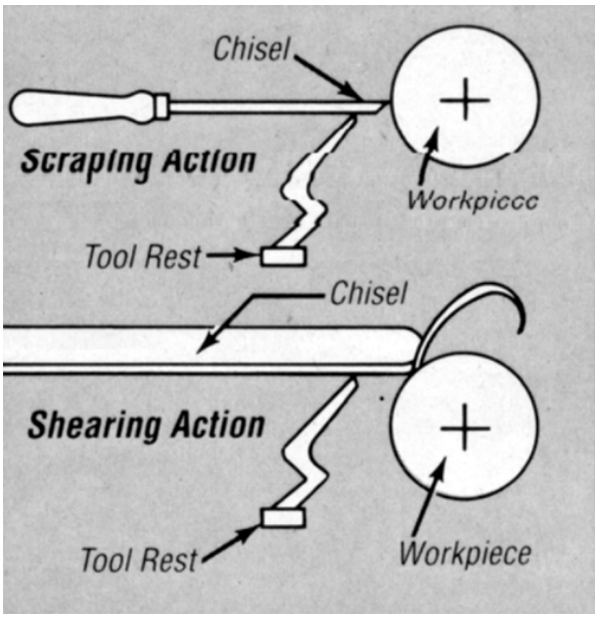
To gauge the desired diameters accurately, use a pair of Outside Calipers with a Parting Chisel and/or a Skew.



There are three types of Parting Chisels that can be used for making these cuts. The first, and by far the most popular of these is the 1/8” carbon steel, *Diamond* Parting Tool such as the one contained in Shopsmith’s Basic Chisel Set. This tool is 1/2" wide and 1/8” thick with a dual-angled tip that’s also tapered to be thinner near its outer edges than it is near the center to provide ample clearance for cuts without binding.

The second of these options is a single-fluted model with a tip that’s slightly hollow-ground. This style is most typically used with its fluted side down and provides an exceptional finish on end grain work. It’s also an excellent choice when you’re going from square to round surfaces, such as on table legs.

The final option is called a *Bedan*. This style has a nearly square shank and tip with slightly tapered sides that slope inward to keep the tool from binding during deep cuts. This is a great choice for making square-edged “coves” and for forming round tenons such as those used in chair-making.



When using the Skew for gauging cut diameters, hold it “upside-down” and use the *toe* of the Skew, lightly touching the pencil lines where your beads and coves are to appear. Next, use either style of Parting Chisel to further define these bead and cove depths.

Periodically, **turn the Lathe off** and use your Calipers to check the accuracy of your cut depths.

Scraping or shearing?

The very mention of this question brings forth an age-old argument between differing factions of wood-turners. Here's how we describe the difference. Scraping is the act of cutting the wood with only the tip of your chisel.

Shearing, on the other hand is a much older turning technique than scraping and is accomplished by cutting with the chisel tip...while the bevel of the chisel is rubbing against the rotating timber at the same time (see illustration). Let's repeat that...by rubbing the bevel of the chisel against the timber as you cut (through the entire cut), you're shearing.

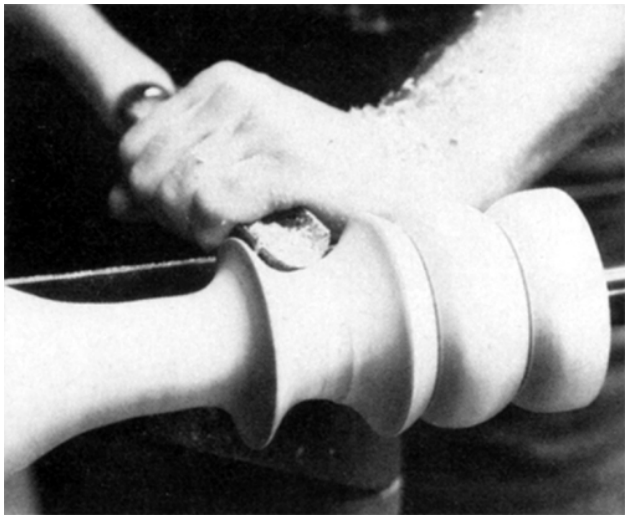
Shearing is by far, the fastest and cleanest turning method. It can be learned only with a great deal of practice and should be a goal for all novice turners. And since shearing is a more difficult technique to master, scraping seems to be the most popular approach for beginners...even though many experienced turners also scrape occasionally.

Shaping the beads

TIP: Always keep the bevel of your chisel against the stock as you cut the bead from the largest to the smallest diameter.

Once you've rounded your stock and made your sizing cuts, the next step with most wood turning projects is to turn the beads (or hills). This is usually accomplished with a standard Skew chisel. However, depending upon the size of your beads and the amount of space between them, you may need to use a smaller chisel such as one of those in Shopsmith's Wood-Turning Mini-Set.

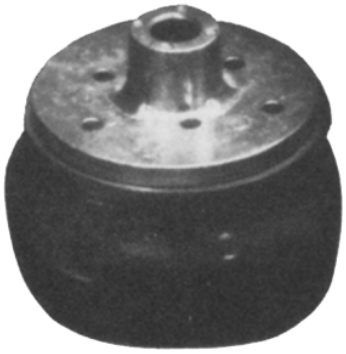
Shaping the coves



After you've formed your beads, move on to shaping the coves (or valleys). Start by selecting the best gouge for your application. For most projects, a 1" or 3/8" Gouge will do the job quite nicely. However, if your coves are to be narrower than these gouges, you'll have to use a smaller Gouge for this job. Again, Shopsmith's Wood-Turning Mini-Set includes both a 1/8" wide and a 1/4" wide Gouge. Either of these three may be exactly what you need.You may form these coves by shearing or scraping...it's your choice.

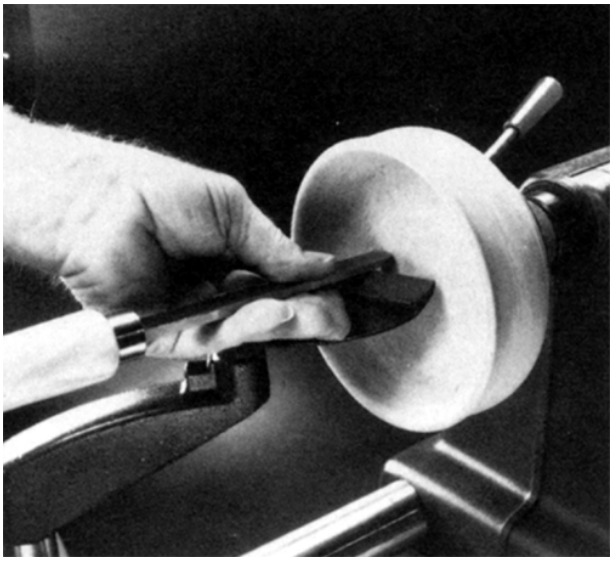
If you elect to use a scraping technique, you may use your Gouges...or use a Roundnose, if you

prefer. This scraping technique is accomplished by moving the chisel back and forth while holding it level.



After scraping a spindle, you'll need to sand it. Turn the speed of your Lathe down to "slow" and start with an 80-grit sandpaper folded into thirds. **Never wrap the sandpaper around your stock.**

After you're satisfied with your 80-grit results, move to successively finer grit sandpapers until you've achieved the smoothness you desire. Remember to always swing your tool rest out of the way when sanding under power on the Lathe....to avoid getting your hand caught between the spinning project and your tool rest.

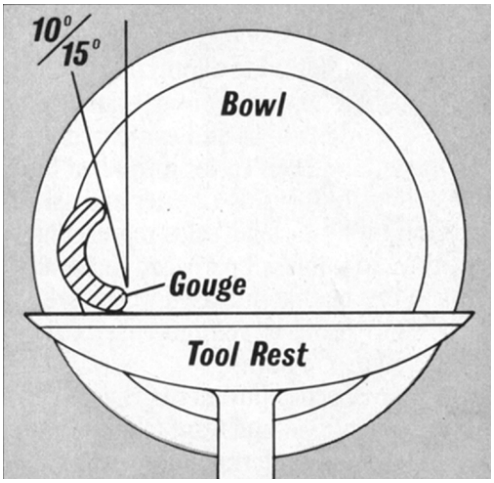


Can you shear bowl stock?

Although shearing is possible on bowl stock, it's important to always remember that the end grain on bowl turning stock is perpendicular (not parallel) to the rotational axis. Start by mounting your bowl stock to a properly sized Faceplate or a precision Lathe Chuck. Special bowl turning chisels help to make this job easier and your results more professional-looking. Remember that when shearing, it's important that the chisels' bevels rub against the timber as you cut.

The standard Shopsmith 1/2" Roundnose Chisel is being used with a scraping technique to turn bowl you see in this operational photo. Always shape your outside profiles first, then reposition your Tool Rest to hollow out the inside.

Tip: Always position your tool rest below the centerline of your stock when scraping. When roughing out with a Gouge or shearing the inside of a bowl, rotate your chisel 10 to 15-degrees from level.



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Other specialized turning tools

As we mentioned at the beginning of this article, there are literally hundreds of chisel types available for specialized jobs. In addition to Shopsmith's Basic 5-piece set, our 4-piece Bowl Turning set and our Wood-Turning Mini-sets mentioned earlier, we also offer an expanded 6-piece set that includes a 1" Oval Skew and a 3/8" Bedan...a 3-piece Miniature Hollow-Forming set and a small, 3-piece Pen-Turning set that includes a unique, 9-In-1 Chisel and a tiny 1/16" Parting Tool.

Special tool rests can also make a significant difference

Articulated Tool Rests such as Shopsmith's Universal Lathe Tool Rest can provide loads of additional control and versatility when turning bowls or spindles of all types. And, when armed with optional 4" Rests, S-Shaped Rests or 90-Degree Rests, this versatility and ease of use increases even further.

In closing

Remember, turning is a lot like horseback riding. To learn to ride properly, you first have to jump into the saddle. And like horseback riding, professional turning results can only be achieved through practice, practice and more practice.