

Sharpening Turning Tools Made Simple

Fast and easy strategies for safer, smoother cuts

By Nick Cook



Many pieces of furniture require turned elements, such as legs, spindles, columns, and pulls. So, learning to turn is a natural (and often necessary) next step for many woodworkers. In addition, there are hundreds of useful and satisfying projects that can be accomplished with little more than a lathe, a small collection of turning tools, and a few scraps of wood. That said, the fun can't start until your

tools are properly shaped and sharpened. Woodworkers have come to expect that store-bought tools require some honing before use. The surprising thing is that some new turning tools aren't sharpened properly. That can make learning to turn way more frustrating than it should be.

Here, I'll demonstrate how to quickly sharpen six of my most-used tools so that you can focus more attention on turning.

I generally prefer freehand sharpening. For me, freehand sharpening is akin to riding a bike without training wheels. Once your hands learn that sharpening is the same as turning, you'll find that shifting from the grinder to the lathe can be quick and seamless. And when you can touch up an edge in less time than it would take to set up a jig, you're likely to sharpen more often.

Turning Tool Starting Set

½" Round-nose Scraper

⅜" Diamond Parting Tool

¾" Spindle Roughing Gouge

⅜" Spindle Gouge

½" Bowl Gouge

¾" Skew

Sharpening Setup

Keeping a few accessories close to your lathe will encourage you to keep an edge on your tools. If you don't already own these items, it's time to stock up.

Slow-speed grinder (6" or 8" wheel)

There are other machines for sharpening and shaping, but a slow-speed grinder is a great starting point. If you don't already own one, this machine will set you back \$150 to \$250.

Tool rests

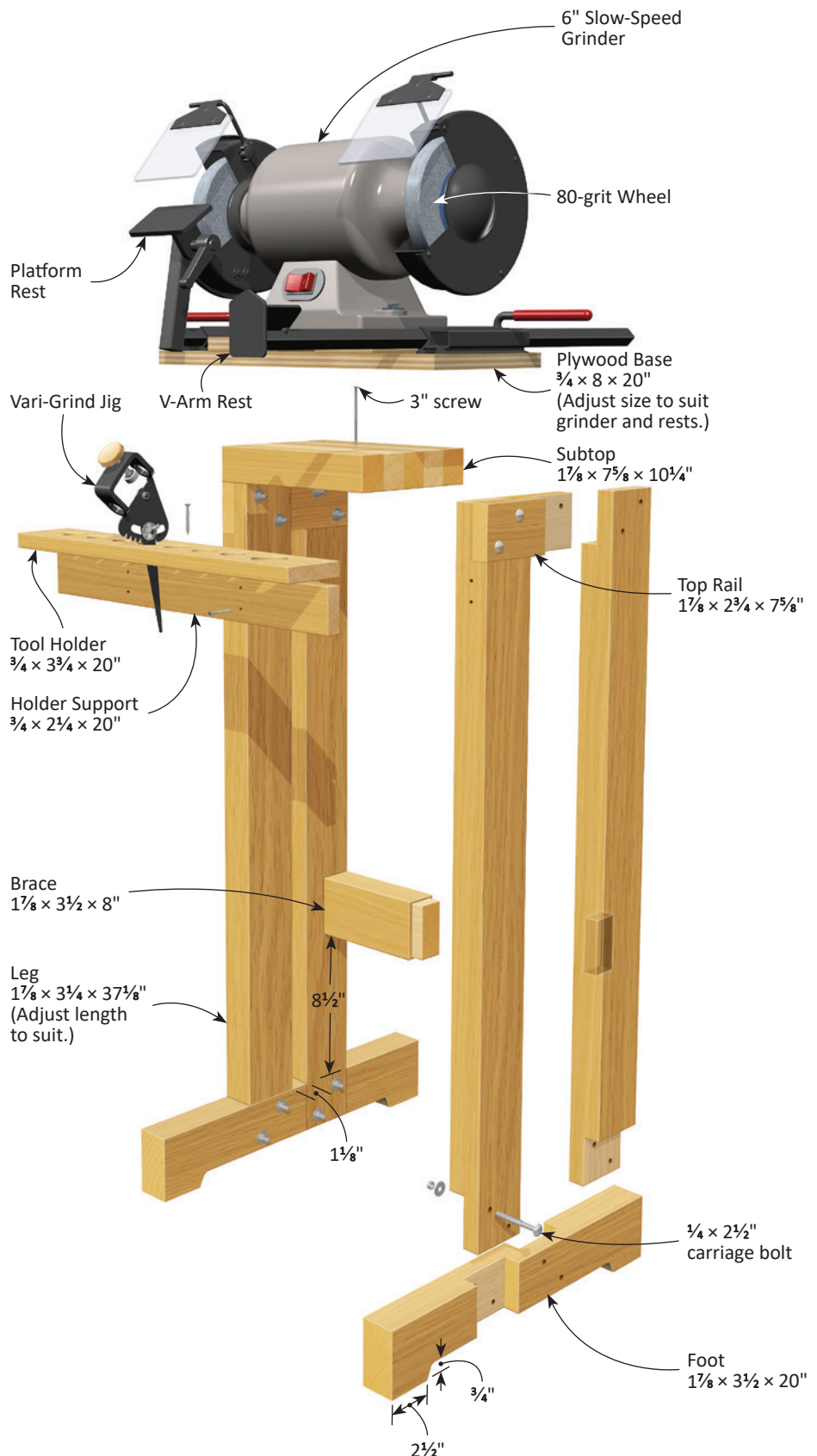
You owe it to your tools to invest in decent aftermarket rests, like the Wolverine sharpening system (#125676, \$89.99). The platform and V-rests are easy to adjust and rock-solid when locked in place. If your budget allows, consider treating yourself to a Vari-Grind jig (#125677, \$55.99) for spindle and bowl gouges.

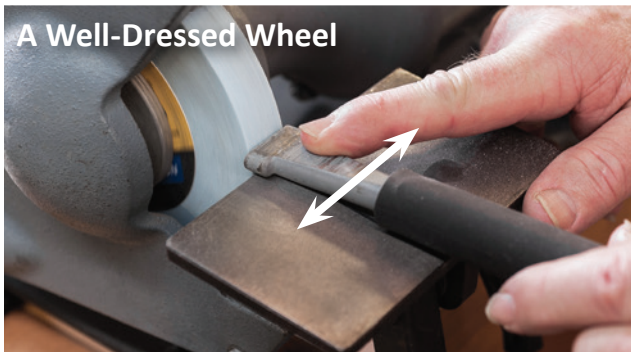
Grinder stand

My dad built this stand (at right) for me 30 years ago. I like that it's rock-solid, but still light enough to move alongside whichever lathe I'm using. (Sharpening should require as few steps as possible.) Adjust the legs so that the tool rests are at the same height as your lathe's tool rest.

Grinding wheels

Both sides of my grinder are outfitted with 80-grit Norton 3x wheels. I find that these wheels remove material quickly and produce an edge that I can use without additional honing. A 6" wheel runs around \$45; an 8" wheel costs \$55.





A Well-Dressed Wheel

With the rest horizontal at the height of the wheel axis, touch the tool against the wheel and slide it sideways to flatten and clean the surface.

Diamond Truing Tool

Grinding wheels require frequent dressing. A light pass with a truing tool (#158522, \$17.99), as shown above, flattens the face of the wheel, removes metal buildup, and exposes fresh abrasive.

Protractor

You may start with factory-set tool angles, but in time, you'll find a metal protractor (#85045, \$20.99) handy for checking an angle or establishing a new one.

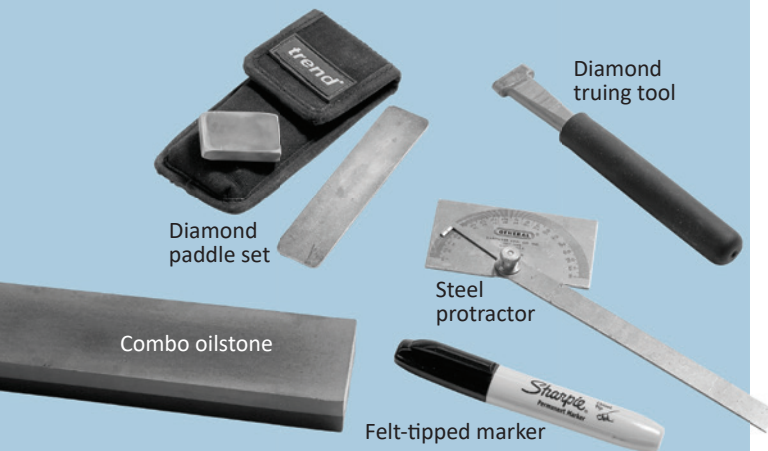
Felt-tipped marker

A marker offers the easiest way to set a tool rest to match an existing angle. Color the edge of the tool and then touch it to the stone. When the grind mark erases the ink on the center of the bevel, you're set.

Sharpening stones

Skew chisels require honing. An oilstone (#149103, \$31.99) is an effective and affordable solution. I also keep a diamond paddle (#415700, \$37.99) in my pocket for tool-side touch-ups.

Handy Sharpening Accessories



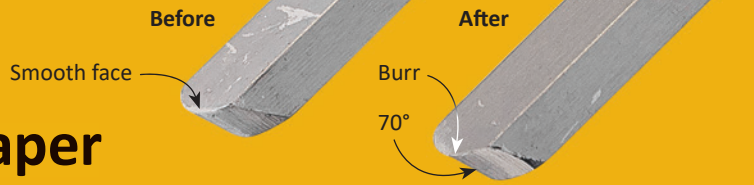
Diamond Parting Tool

Designed for cutting straight, accurate diameters and for separating a turning from the waste portion of a blank, a parting tool is a cross between a cutting tool and a scraper. When the edge is held tangent to the workpiece with the bevel rubbing, it's cutting. When the tip is fed straight into the workpiece at or slightly above the centerline, it's scraping. Parting tools come in several varieties: flat, diamond, and "fluted." You'll want to purchase other parting tools eventually, but the diamond is a good tool to start with because it's easy to use. Because the tip is at the thickest part of the shaft, a diamond parting tool can take deep cuts without the sides binding in the kerf.

Typically, the factory-established bevels meet at a 50° angle, so this tool should be ready to go with just a quick touch-up. (Note: A lower angle will produce a cleaner cut, but it tends to break down quickly when used for scraping.) To sharpen, adjust the flat tool rest so that the tool's bevel angle matches the wheel. Then, gently push the edge against the wheel. Focus on removing an equal amount from both faces so that the point remains centered on the tool. Stop as soon as the edge is square and you feel a burr. (I don't worry about polishing or honing off the burr. It'll get knocked off as soon as the tip touches the blank.)



Scraper



It's difficult to see a difference between the "Before" and "After" images, but if you were to run your finger across the top face of both tools, you'd immediately notice the wire edge, or *burr*, on the properly prepared scraper. This burr is what gives scrapers the ability to produce glassy smooth surfaces. Burrs don't last long, but they can be reestablished in seconds.

Adjust the tool rest so that the face of the bevel meets the contour of the wheel. To ensure that the angles match, color the tip of the tool with a marker and touch it against the wheel. Adjust the platform until the wheel

touches the middle of the bevel. Now, with the tool flat on the rest, gently press the scraper's tip into the wheel and follow the shape of the edge. With a round scraper, this means swinging the tool's handle back and forth. When sparks start landing on the top face of the tool, and you can feel the burr, you're done.

Note: Some turners polish off the burr on a buffing wheel, and then use a burnisher to draw a burr. A drawn burr may be a little tougher, but I don't think the performance warrants this extra step. I find that more frequent grinding is faster and easier than hand-drawing a burr.



Spindle Roughing Gouge

A spindle roughing gouge turns blanks into cylinders; it can also turn basic shapes, such as tapers. Note that this tool is for spindles only. It is not intended for bowl turning.

Any bevel angle from 40°-55° works; so the factory-ground angle is a good starting point. Adjust the angle of a flat rest so that the tool bevel rides against the stone. Now turn on the grinder, and with the tool parallel to the wheel, touch the tip of the tool. Lay the tool on the rest, and slowly push the gouge toward the wheel. When the tip contacts the wheel, use one hand to keep the tool against the table and rotate the gouge until you reach the other side, and then reverse direction. As you

grind, focus on holding the gouge firmly on the rest and keeping its end square to the wheel. When sparks come over the top of the tool, you should be done.

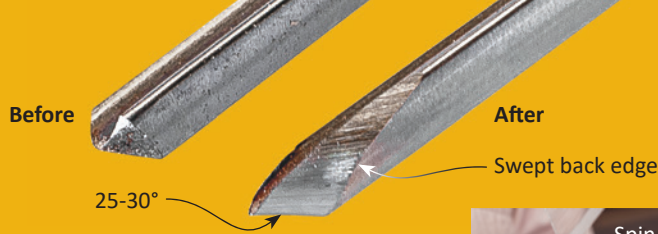
Note: Some turners suggest resting the handle's butt in a V-arm rest, but I think this procedure is unnecessarily time consuming, and potentially dangerous. If the edge



should catch, the grinder's rotation would jam the tool into the wheel. In my opinion, freehand grinding is safer and just as accurate.



Spindle Gouge



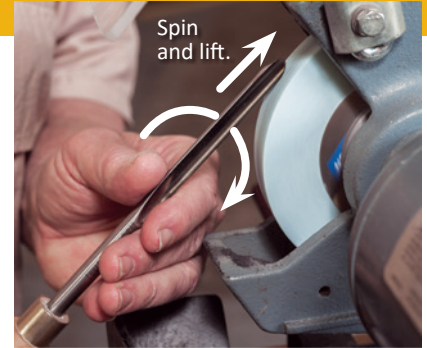
The spindle gouge is designed to cut curves, coves, and other detailed profiles on spindles and bowls. These shapes are easier to do if you lengthen and curve the bevel to create a “fingernail grind,” as shown above. Unlike a roughing gouge, this profile has a longer, tapered point, with cut-back shoulders designed to stay clear of the cut.

Sharpening a spindle gouge requires more practice than other tools because the tool is rolled against the grinding wheel while simultaneously being slid up higher on the wheel to grind the wings. Unlike a basic gouge, you cannot simply set the tool on the rest. To facilitate this two-step process, I set my



resting hand on the V-rest as shown above left. (I think this method keeps your hand a safer distance from the wheel.)

With the grinder off, set the gouge on your resting hand and slide it forward until the middle section of the bevel touches the upper half of the wheel, and then allow it to tip away from the wheel. Now with the grinder on, raise the handle until the full



bevel touches the wheel. As you rotate the tool, simultaneously push it up on the grinding wheel, as shown. Repeat this process on one side until sparks come over the edge and inside the flute. Then repeat the procedure on the other side of the bevel. As a final step, rotate outward in both directions from the middle of the gouge’s cutting edges to make a uniform, continuous bevel.

Bowl Gouge

I grind bowl gouges in the same manner as my spindle gouges; however, I do grind a higher bevel angle (around 75°-80°) in order to provide more mass under the cutting edge. This gouge can also be sharpened freehand, but when establishing a brand-new bevel on a larger gouge, I appreciate help from the Vari-Grind jig.

To use the jig, first employ the stop so that the tip projects about 2" from the front of the jig as shown. Adjust the jig’s leg per the manufacturer’s instructions, set it in the V-rest and then slide the rest out so that the center of the bevel rests on the center of the wheel. Now, turn the grinder on, and lower the tool onto the

wheel. Grind the tip first, and then pivot and swing the jig in each direction, as shown to create an even grind. (As you can see in the photo, it helps to stand to one side the grinder in order to stay clear of handle.)



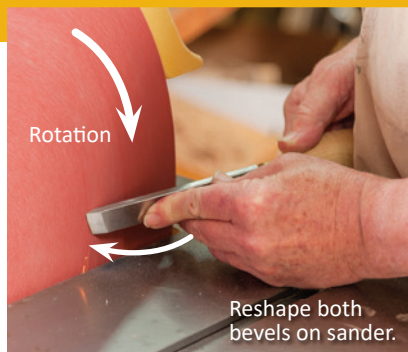


Skew Chisel

The skew chisel is my go-to tool for most spindle turning. It can be used not only to shape, but also to finish cylinders, V-grooves, beads, and long concave curves. Although it's regarded as the most difficult tool to use, once mastered, it can produce finished surfaces as smooth as the finest grit sandpaper, in a fraction of the time.

Since it is a finish-surface tool, a skew must be razor (literally, hair-shaving) sharp. Fortunately, getting a surgical edge isn't that much harder than sharpening a standard bench chisel.

Rather than using a grinder, I prefer shaping the bevels on either a disc or belt sander outfitted with 80-grit abrasive. Unlike a wheel, these machines maintain the flat bevel. (Note: To avoid any chance of fire, remove sawdust from the sander and surrounding area.)



Using the factory-established bevel as a guide, rest one hand on the sander's table, and then swing the tip against the disc or belt, as shown. As you do this, be mindful not to catch the tool's top corner. To avoid a catch, let the skew's bottom edge touch the abrasive before fully registering the bevel against the disc. Repeat this procedure on the opposite face. After grinding both faces, check the bevels, and then make any necessary adjustments so that both bevels are the same length.

After grinding, you'll need to hone the edge. While I'm still at the machine, I'll set up an oilstone. Simply register the bevel against the stone, and slide the tool back and forth as shown until you've achieved a mirror surface. A few passes on each side should do the trick. These days, I also keep a diamond paddle in my apron

pocket. This accessory provides a handy way to touch up an edge before making a finishing cut. I find that I can re-hone an edge several times before needing to regrind it. ■

About Our Author

Nick Cook is a founding member of the American Association of Woodturners, and conducts woodturning workshops across the country. He just completed 1,219 napkin rings from Auburn University's famed Toomer's Corner Oak.



Is it Sharp, or Not?

If you've tried using a turning tool brand new, or attempted to turn too long without going back to the grinder, then you already know how a dull tool will pull or tear at your turning, leaving a surface that can be impossible to sand smooth. The trick is knowing when a tool needs a touch-up, before the damage is done. The ability to

tell the difference requires a certain amount of experience, especially since some woods are harder to turn than others.

One quick way to determine whether a tool is sharp or not is by dragging its edge across your thumbnail. If the edge catches and creates a curl, you're set.

The best advice I've heard is, "When in doubt, sharpen."



As sharp as my tools are, I still make a habit of touching up an edge before making a final cut.

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