

The Spokeshave

How to choose and use one

by Michael Sandor Podmaniczky

The spokeshave is a marvelous tool. Compact and comfortable to use, it can, with care, perform admirable service in a diversity of jobs. I find myself using one nearly every day for cleaning up drawknifed chair spindles, shaping and fairing curved parts, chamfering anything. . .and on and on. The spokeshave isn't without its quirks, though, and unless you learn to live with them, it's hard to get the tool working just right.

First of all, you've got to decide which spokeshave to use for which job or, if you don't have any spokeshave at all, which to buy. A glance at the spokeshave section in my favorite wishbooks reveals an armload of choices priced between \$4 and \$24. You could buy them all, but the collection would leave too little

room in your toolkit and too much room in your wallet. Most mail-order catalogs offer several sizes of metal spokeshaves in two generic types: flat-soled and curved-soled.

As its name implies, the working face of a flat-soled spokeshave is machined flat, and apart from its extended handles, it looks and works like a plane with a very short, narrow sole. A round-soled spokeshave has a straight blade, like a plane, and when viewed from the front its sole appears flat. Viewed from the side, however, the sole is curved to a radius of about 1½ in. A half-round spokeshave is different altogether. It shows a concave sole from the front and has a blade curved along its width. A convex spokeshave is similar, but as the name implies, the sole is curved in the other direction.



Bought from a mail-order catalog or at a fortuitous yard sale, there's a spokeshave for every purpose. Reading counterclockwise from lower right: flat-soled wooden shave; shopmade convex

for shaping chair seats; cooper's spokeshave; flat-soled metal with dual screw adjusters; author's favorite 9-in. Kunz (painted black); metal shave with single adjuster.

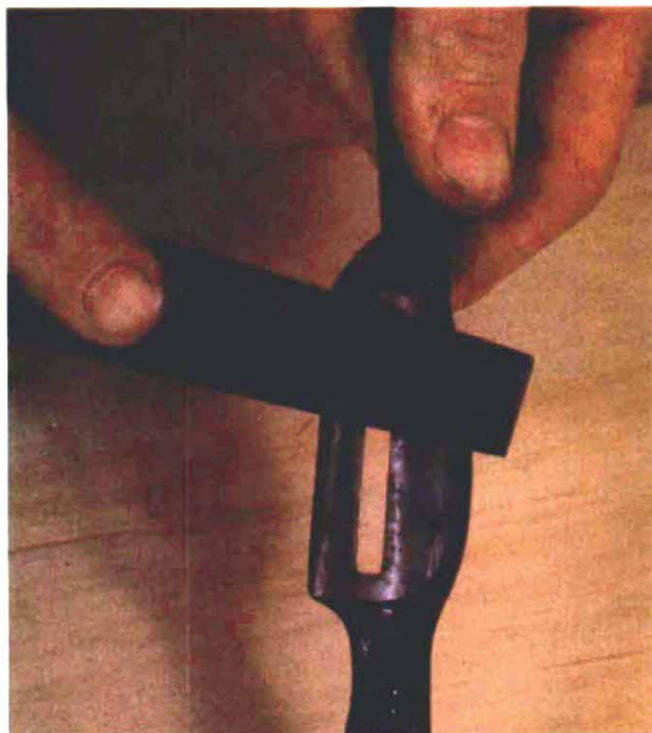
Which you buy depends more on how much you want to squeeze out of your tool dollar than it does on the kind of woodworking you do. I whittle the selection down to manageable size by first deciding what I can do without. The half-round spokeshave, meant for shaping cylindrical parts like banister rails, is useless on work whose radius is larger than that of the tool's sole. On work of lesser radius, you'll do just as well with a smooth or block plane or a flat-soled spokeshave—after all, tangent is tangent and there's no point cluttering up your toolbox with a single-purpose tool when a more versatile one will do. Combination spokeshaves are round and flat-soled shaves married by a single handle—good in theory, not so good in practice.

A cooper's spokeshave is big and beefy, and some boatbuilders like it for wearing down the inside surfaces of heavy, sawn ship frames. I've learned to work close and accurately with the bandsaw or drawknife, then touch up with a flat or round-soled spokeshave. Another sucker-born-a-minute tool is the adjustable-mouth spokeshave. I rarely need this capability, but if I do, I slide one or two bits of shimstock or aluminum flashing behind the blade to close the mouth down, and I'm all set. Infinitely variable settings I don't need. Fine and rank will do nicely. A chamfering spokeshave—a flat shave with two adjustable fences mounted on the sole—is as specialized as an overbred show dog and I'm happy to do without both. One word about handle styles: those gull-winged spokeshaves which look like a 1960 Chevy in retreat are not proper. Having your hands up in the air, away from the line defined by the blade edge makes it very difficult to control the tool.

So it all boils down to this: Equip yourself with two simple straight-handled spokeshaves—a flat-soled for general-purpose smoothing or shaping of flat and convex or shallow and concave surfaces, and a round-soled for working tight inside radii. If you can find one, I'd recommend an old wooden-bodied type of flat-soled shave—and I don't mean the adjustable rosewood models you see in the catalogs these days. I'm talking about one of those dime-a-dozen beechwood jobs (sometimes fitted with a brass foresole) that always turn up in junk shops and yard sales. These are light, well-balanced and compact; the only tool for getting into that hard-to-shape curve on a Windsor chair seat, just forward of the arm post. Make sure the blade has a little life left to it and that the blade tangs fit tightly enough into the wooden body to hold the depth setting.

If you can't find a wooden shave, the best metal ones also happen to be the simplest. I like the 9-in. flat and round-soled models made by Kunz (Garrett Wade's #19P02.01 and 3.01). Besides being inexpensive, these tools have another important advantage: you adjust the blade by loosening a single screw that holds the cap iron in place, instead of by the cumbersome thumbscrews found on more expensive spokeshaves, like the Record. Screw adjusters just get in the way and, worse, they rattle. There's something evil about anything loose on a hand tool, and unless I can stop the rattle with, say, beeswax to clog the threads, I just won't use the thing. For me, using a fancy Record spokeshave is like hopping into a Delta 88 after years of driving a Rabbit. No thanks, I'd rather soup up the Rabbit.

Being an inexpensive tool, the Kunz needs some tuning. The frog, the surface against which the back of the blade bears, should be filed flat to minimize chattering. Hollow-grind the inside edge of the cap iron so it bears against the blade only along its leading edge, and set it about $\frac{1}{8}$ in. back from the blade's cutting edge. True an out-of-flat or poorly curved sole with a file



Dressing a metal spokeshave's sole with a file improves its performance. To keep it from rocking, file the sole flat across its width. The Kunz, above, has no adjusters so author ground pockets on either side of the frog. A screwdriver inserted into both the pockets and the corresponding notches filed in the blade edge aids depth-setting.

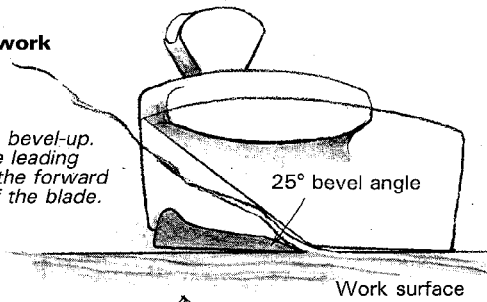
as well, as shown in the photo above. Remember, since the spokeshave rides on the leading and following edges of the sole, you'll want to file these edges straight across so the shave won't rock from side to side. To make blade setting a little easier, I ground small pockets in the casting adjacent to the blade with a Dremel tool. By inserting a screwdriver blade, which bears against nicks I filed in the blade, I can finesse the cutting depth I want.

Sharpen a metal spokeshave blade as you would a plane iron. Using an aluminum-oxide wheel, grind the bevel to about 25° or so—you don't need to get your protractor out, just eyeball it close. Next hone a bevel with a fine India stone, following that with a touchup on a hard Arkansas. A wooden spokeshave usually won't need grinding. But if it does, the metal, like a drawknife

How spokeshaves work

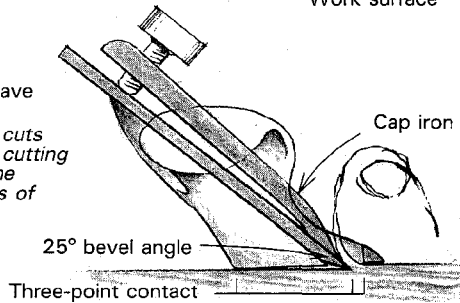
Wooden spokeshave

A wooden shave cuts bevel-up. Contact points are the leading edge of the sole and the forward portion of the back of the blade.



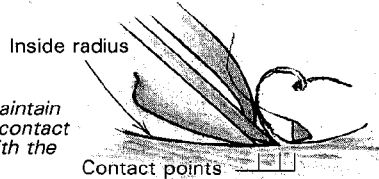
Flat-soled metal spokeshave

A flat-soled spokeshave cuts like a plane. The correct cutting angle is maintained by the leading and trailing edges of the sole and the blade.



Round-soled metal spokeshave

The cutting angle is harder to maintain because the area of three-point contact is much smaller, and changes with the radius of the work.



The spokeshave's short sole makes it perfect for shaping and smoothing curved wooden parts, such as the Windsor chair seat Podmaniczky is making here. Best results come when the blade is kept at the correct angle to the work; control achieved by pushing rather than pulling the tool.

blade, is often soft enough to file. Keep in mind that the blade pushes rather than slices through the work. This means that the blade should not have the micro-serrations left by a fine India but the polished microbevel produced by a hard Arkansas or comparable stone.

To get a spokeshave to do what you want it to, it's helpful to understand what makes it tick. Although it works like a plane, a spokeshave is really just a jig, a holder for a chisel blade. You could conceivably "plane" a surface dead-flat with a chisel, but the job would require a personality most unwelcome at an intimate evening over dinner. That's where the sole of a plane comes in. It orients the blade to the wood surface, allowing the plane to smooth a board by removing material and flatten it by bridging the peaks and valleys of the wood surface. Thanks to the plane's frog, the cutting bevel is always positioned at just the right angle.

It's not so straightforward with a spokeshave. While a plane both smooths by removing material and flattens by virtue of its long sole, the spokeshave is primarily a material remover. The sole is far too short to bridge surface irregularities of any size and is not as self-jigging, so you, the operator, have to keep the blade at the right cutting angle by holding the spokeshave correctly. As you work away with the spokeshave, you must deftly check your progress, shave some more and check again until the surface is just right. To get a consistent cut, position the tool to contact the work at three points—the sole's leading edge, the cutting bevel, and (just barely) the trailing edge of the sole. The drawing at left gives some idea of the angles involved. If you rock fore or aft on the sole, the cutting angle will be wrong and the spokeshave will skid over the wood instead of cutting. A wooden spokeshave works a little differently: since it cuts bevel-up, the forward portion of the back of the blade, rather than the sole, serves as the reference surface. To get the right feel of either type, you'll have to sharpen the blade and try it.

I sometimes pull my spokeshave for various reasons, like grain direction or body position (I *hate* standing on my head while working at the bench), so I'd never say don't pull, but these tools are designed to be pushed. And with just a little practice, you'll get far greater control by pushing. A nice feature on some spokeshaves are the cozy little thumb rests on either side of the frog. Fingers need not be wrapped around the tool handles. If the surface being worked is quite broad and one or both handles don't hang out over the edge, grab whatever is comfortable around the frog and cap iron with thumb and forefinger and push on the handles with the palm of your hand. Since *proper* handles are straight in line with the blade edge (*not* gull-winged, up and away), even without a firm hand grip, there is no tendency to roll or trip up. This grip is really helpful with round-soled spokeshaves, as they can be friskier than the flat ones.

If, no matter how you hold it, the spokeshave skids without cutting, either the blade is dull or it isn't set far enough below the sole to pull a shaving. Raise the blade a little if your spokeshave digs in and stops cold. Don't give up in frustration if the tool misbehaves at first. Starting off with the right tool, setup and procedures for use will eliminate most of the hangups that could discourage you from using it. As time goes by, you'll develop quite an affection for that versatile little fellow who lurks down in the corner of your toolbox. □

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