Spokeshave Essentials

Choosing and using the best spokeshave for the job

BY PETER GALBERT

When I picked up a spokeshave for the first time, I felt like all the fun, control, and empowerment I'd looked for in handplanes was finally at my fingertips. Since then, spokeshaves have become integral to my work; they can do things my bench planes can only dream of. I can rapidly shape wood to the curves I want while leaving a finish-ready surface behind. I consider them the off-road vehicles of the handplane family.

Knowing how to choose, tune, and use spokeshaves is key to getting the most out of them. There are a few types and brands I use, and each excels in specific situations. Some work like short-soled handplanes that take shavings of consistent thickness, and some are more akin to carving tools, which vary their depth of cut depending on their orientation to the workpiece. I'll take you through the differences, what they mean in practice, and my favorite kinds of each. While specialty spokeshaves exist and can be useful, the large bulk of the time I use standard versions.

Metal vs. wooden body

I find it most helpful to organize spokeshaves into two categories, those with metal bodies and those with wooden ones. There are subcategories, but metal vs. wooden is a great place to start. This is because the anatomy and geometry of each makes them well suited to different tasks, and knowing which to pick up when—as well as how to use it—will lead to better, more enjoyable work.

Metal body—Metal-body spokeshaves are essentially short-soled planes with handles coming out of the sides, making them light and nimble. The blades are bevel down, and they have a lever cap that acts as a chip breaker. The soles come in two main profiles, flat and round. Flat is best on convex or flat shapes, but it can bottom out in concave shapes. I use round soles for these.

For light shaping and finish surfacing, I prefer metal shaves. Because they are so akin

Photos: Barry NM Dima

METAL BODY

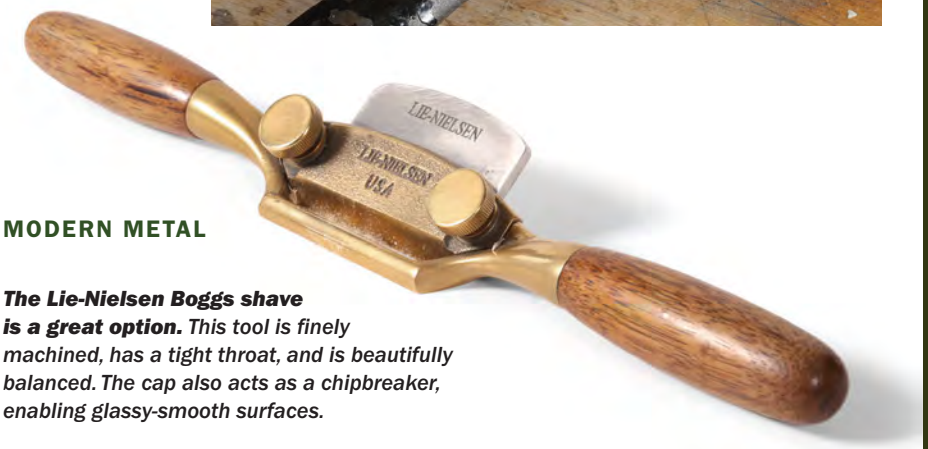
With anatomy and geometry similar to a bench plane's, metal shaves are great for light shaping and finish surfacing.

VINTAGE METAL

First choice. *Galbert's workhorse (and first spokeshave) is a vintage Stanley 151, which has a flat sole. These models are still widely available on the used market.*

Knurled knobs for easy, accurate adjustment. *To set the depth of cut, the 151 has a mechanical adjuster on each side of the blade, making adjustments intuitive, easy, and accurate.*

MODERN METAL



The Lie-Nielsen Boggs shave is a great option. *This tool is finely machined, has a tight throat, and is beautifully balanced. The cap also acts as a chipbreaker, enabling glassy-smooth surfaces.*

Tap to adjust. *Although this spokeshave doesn't have knobs like the 151, adjusting it is simple once you get used to it. While keeping the cap iron tight, just use the inertia of the blade by tapping the metal body—not the wooden handles—on end grain to knock the blade in or out.*

Three grips

Push. *When pushing the tool, Galbert's thumbs comfortably fit into the areas behind the body of the tool and drive the motion. He uses a delicate grip, and focuses pressure right above the sole with his index fingers.*

Basic pull. *This time, Galbert uses his thumbs to apply pressure to the sole. His hands and other fingers gently hold and guide the tool, preferably just with his fingertips.*

Pull and support. *This is Galbert's favorite grip. It's the same as the basic pull, except he braces the stock underneath with his fingertips, stabilizing the workpiece and giving tactile feedback on the cut.*

ROUND SOLE

Round soles for inside curves. *When working concave shapes, Galbert uses a spokeshave with a radiused sole that can better navigate an inside curve. On flat and convex shapes, however, the small contact point is difficult to manage and more prone to vibration.*

to bench planes, with similar bed angles and anatomy, they excel at similar tasks, working well along the grain. This is also why I prefer these shaves to have tight mouths. A tight mouth translates to a limited depth of cut, but it also means a cleaner surface.

There are many ways to push, pull, and hold spokeshaves. With metal shaves, I use three grips, but they all have one thing in common: pressure just atop the sole. Don't be tempted to focus your grip on the handles.

My main metal spokeshave is a vintage Stanley 151, which has dual depth adjusters above the blade. Stock models of the 151 can stand some upgrades. For one, I replace the thin stock blade with a heavier one from Hock. File the bed flat if necessary too.

The Lie-Nielsen Boggs shave, with its metal body and wooden handles, is also a favorite, coming in both flat- and round-soled versions. This tool is finely machined and has a tight throat. The Boggs shave's weight and balance let it handle beautifully, and although it doesn't have knobs like the 151, adjusting it is a mere matter of tapping the metal body. The shave's cap iron acts as an excellent chipbreaker, enabling glassy-smooth surfaces.

Sharpening the blade in a metal spokeshave is just a variation on sharpening plane blades. The challenge is holding the blade. Depending on the condition of the tool, I vary my approach. I usually hollow-grind them on my bench grinder and hone them freehand, although I sometimes reach for a honing guide to put on a quick microbevel.

Wooden body—Wood-bodied shaves predate metal shaves, and they still have some distinct advantages when tuned up and used correctly. Proper use of a wooden-bodied shave differs markedly from that of a metal shave, because of a key difference in its anatomy. Unlike metal versions, wooden shaves have low-angle,

Tuneup

File the blade bed flat if necessary. *With vintage spokeshaves, check that the bed is flat. If it's not, the blade will be poorly supported during the cut. File the bed if it's off, checking your progress frequently.*

Upgrade to a thicker blade. *Compared with thin vintage blades, thicker blades dampen vibration, close up the throat of the tool, and make sharpening freehand easier because of the wider bevel.*

Long jaws needed for honing guide. *A honing guide can produce a quick and even microbevel. Galbert uses a Lie-Nielsen honing guide with the optional long jaws to hold the short spokeshave blades.*

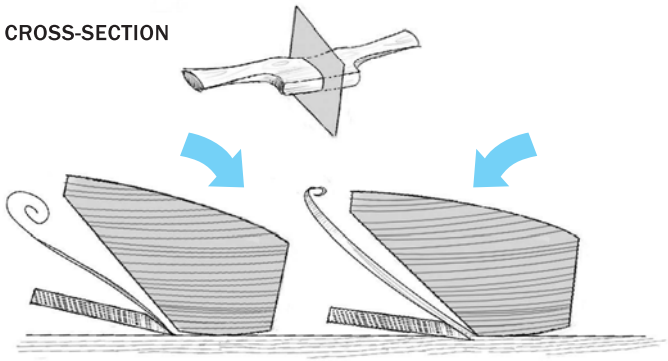
Look for models with blades secured directly to the body, either with tangs (below left) or screws (below right).

TRADITIONAL
TANGED

MODERN
CALEB JAMES

Curved sole for an adjustable cut. *The sole on a wooden shave should gently curve away from its mouth. This lets you roll the tool forward or back for a thinner or thicker cut—no blade adjustment necessary.*

CROSS-SECTION



Roll spokeshave forward to take a light cut.

Roll spokeshave back for a heavier cut.

Caleb James spokeshave blade screwed to body. *This modern offering uses two Phillips-head screws to mount the blade, ensuring a proper relationship between the blade and sole every time.*

bevel-up blades. And on my favorite wooden models, the blades have a complex, versatile relationship with the sole, which is gently rounded away from the mouth of the tool. In use, you can adjust the depth of cut by rolling the tool until it contacts the sole at the best position for the desired shaving. So you can take light or heavy cuts simply by pitching the tool slightly more forward or back while cutting. This allows me to hog off material quickly and then shift on the fly to take light finish passes. Also, when cutting a hollow shape, I can continually advance the blade into the radius.

Push cuts only. *Galbert pushes with his thumbs, allowing him to be very sensitive to the cut. Pulling reduces this sensitivity. He focuses pressure just atop the sole.*

Adjust the cut by rotating the tool. *You can take light or heavy cuts simply by pitching the tool slightly more forward or back. This allows you to hog off material quickly and then take light finish passes without fiddling with blade adjusters.*

Sharpening

Gently tap out the tanged blade. *These antique tangs can be brittle, so take care to hammer out each side evenly and carefully.*

Sharpen the back on the stone's face. *Apply even pressure across the blade, and angle it so the entire back remains in contact with the stone.*

Sharpen the bevel on the stone's edge. *Use this approach when the tangs are too close together to use the stone's face or the blade isn't perfectly straight across.*

Because I want this versatility, I prefer wooden spokeshaves without adjusters. (Some wooden models have screw adjusters like the Stanley 151.) While a small ability to adjust the blade is helpful if the sole is flat or less than ideal, I think that the adjusters can distract from the better option, which is the relationship between the blade and the rounded sole. Modern wooden shaves with flat soles and adjusters basically give the same results as a metal-bodied tool; they lack the ability to alter the depth of cut on the fly.

For wooden spokeshaves I recommend either those with blades screwed into the body, like Caleb James's excellent version, or those with blades that have tapered tangs at 90° to the blade and are mortised into the body.

Because of the orientation of the blade and the shape of the sole, I think of this type of shave as a shaping tool, one that performs best when carving more curvaceous shapes. This tool is also useful when cutting end grain, as the low-angle blade slices through the fibers more easily than high-angle metal shaves.

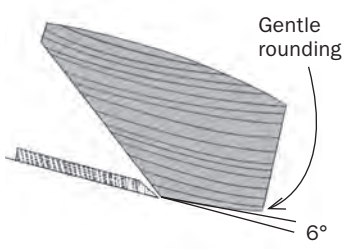
Wooden spokeshaves tend to have a more open mouth and there is no chipbreaker, so I don't use one when shaving along the fibers of a workpiece. And cutting in the wrong direction with a wooden shave is unforgiving since the wood can easily split ahead of the blade. Wooden shaves are almost always my choice for fast, initial shaping, but I will sometimes switch over to a metal shave for final surfacing.

I only ever push wooden spokeshaves. If I try to pull the tool, I'm not nearly sensitive enough to its pitch, negating the versatility of the rounded sole. Modern versions with flat soles and adjusters can be pushed or pulled.

Resole

Inset a new hardwood patch to improve performance. *Galbert finds a gently rounded sole critical, so he will epoxy on a fresh sole to give an old shave new life. He uses hard, dense wood for the new sole.*

Shape with a block plane. *Hold the plane about 6° off the blade's bedding angle while very slightly rounding the sole. You only need a little bit of curve. If you go overboard, the sweet spot for engaging the blade becomes smaller.*



Drawings: Peter Galbert

HELPFUL TIPS

A number of techniques and strategies work for both wooden- and metal-bodied shaves.

SWITCH THE SKEW

Alternate the leading hand for smoother surfaces. *This cross-hatching approach gives you a better feel for the surface you're shaving. Also, when you switch skewing directions, the spokeshave hits the high spots left by the previous pass, creating a more even surface.*

When it's time to sharpen the blades, I find that I work the flat back as much as the bevel. It's easier to hone, and removing material from there helps keep the blade's relationship to the sole more constant as the bevel wears.

Different shaves, similar strategies

Despite the differences between metal and wooden spokeshaves, many strategies, from skewing to complex shaping, work for both.

As with all hand tools, cutting gets more difficult as the shaving gets wider. Whenever possible, I keep the cut narrow—and easy. If the shape is meant to be flat in the end, just take wide shavings as a last step after creating several narrow facets that build up to a flat.

Also, like just about any edge tool, skewing the shave for a slicing cut will yield superior results and reduce the force required. There are many reasons for this. Skewing the blade also directs the cut partially cross grain, which requires less force.

One circumstance where skewing leads to a smoother surface is when two distinct profiles meet at a sharp edge. Here, enter the cut with the tool angled so that only a short length of its sole is firmly bedded at the start. This lets you slice into the cut instead of chatter into it when you suddenly contact the full width of the blade.

Alternating the direction of the skew can also help produce smooth surfaces. By alternating which handle leads, you'll get a more complete feel for the surface you're shaving, letting you

CREATE SHARP TRANSITIONS

Start off the surface for sharp transitions. *When two distinct shapes meet at a sharp edge, angle the shave so that only a small portion of the sole is firmly bedded at the start. This lets you smoothly slice into the cut instead of abruptly contacting the blade, which can cause chatter and an uneven cut.*

Skew toward the longer fibers. *This keeps the fibers supported throughout the cut, limiting tearout. On a simple bevel, cutting toward the long point of the bevel is best (above). You should skew the tool so it slices up and away from the fibers (right). Otherwise, you can significantly tear out the wood.*

First address the perimeter. *To shave a complex collection of curves like this chair seat, Galbert bandsaws close to the line, fairs those cuts with the shave, then creates a thin flat around the perimeter.*

Rub lead onto the flat. *After penciling in the flat, Galbert will shave the curves on the top and bottom of the chair seat. The penciled flat will allow him to monitor his work on the two opposing planes.*

better adjust the spokeshave. It also lengthens the relatively short sole, enabling it to bridge high spots and take them down rather than ride up and down between them.

When fine-tuning complex shapes for fair, clean lines at the edges, I have a simple, three-step technique. I'll use a chair seat as an example, which has three curves—its top, bottom, and the plan view—that meet around its perimeter. First, after roughing the shapes, I refine the plan view, ending with a small flat along the profile. To help with the next two steps, rub graphite on this flat. Next, shape the top of the seat. There should be some graphite left. Finally, shave the bottom surface until there's just a fine line of graphite left. Don't overshoot the line here, or the profile will be ruined and you'll be back to step one. □

Peter Galbert makes Windsor chairs in Boston and teaches around the country. He is author of The Chairmaker's Notebook *(Lost Art Press, 2015).*

Bring the top and then bottom curves together at the perimeter pencil line. *The top of the seat, the more noticeable surface, gets shaved first. From there, shape the bottom until there's an evenly thin line of pencil left—evidence of a perfectly crisp, multifaceted shape.*