



Meant for each other. Curtis Buchanan, a chairmaker for 30 years, says the drawknife and shaving horse “go together like peanut butter and jelly.” Still, he says, the drawknife also works beautifully when used with a bench vise.

Master the drawknife

A BRILLIANTLY SIMPLE SHAPING TOOL THAT’S VERSATILE, FAST, AND A PLEASURE TO USE

BY CURTIS BUCHANAN

Drawknives are astonishingly versatile tools, capable of removing a huge amount of wood in a hurry, or finessing fine surfaces. They’re equally good at creating flat planes and complex curves. Used with the bevel up, a drawknife works well for creating long, flat surfaces. Used with the bevel down, it will make all sorts of concave cuts—from slight to severe. While cutting face grain, a drawknife allows you to cut between the growth rings to create stock that’s beautifully suited to bending and has the ultimate structural integrity. Used with a skewed stroke on end grain, a sharp

drawknife will leave a finish that looks like it’s been waxed.

Depending on the angle of the handles relative to the blade, a given drawknife will be better suited to working bevel up or bevel down. If the handles are in line with the back of the blade, the knife is more comfortable to use with the bevel down. If the handles are closer to being in line with the angle of the bevel, the drawknife will be most comfortable used bevel up. You can get by with one drawknife and use it both ways, but having one of each type is a plus.

Grinding and honing

Sharpening a drawknife might seem daunting, but if you

The drawknife family

Drawknives come in various sizes and shapes—the blade may be long or short, wide or narrow, straight or curved. Most importantly, though, drawknives are divided between those designed to work best bevel-up or bevel-down. In bevel-down drawknives, the handles are roughly parallel with the plane of the blade. In bevel-up knives, the handles are canted slightly toward the plane of the bevel. You can get by using a bevel-up drawknife for bevel-down cuts, but it’s best for bevel-up cuts. The same goes for a bevel-down knife—it’s usable for bevel-up cutting, but not nearly as comfortable as it is for bevel-down cutting.



Sharpening a drawknife

File the back. To simplify sharpening your drawknife, you'll need the back edge of the blade to be smooth and free of dings, so give it a going over with a file.



RESCUE AN OLD DRAWKNIFE

Tighten the handles. If the handles of the drawknife are loose, you can tighten them with a few hammer blows to the end of the tangs.



GET GRINDING

Joint the blade. Create a fair edge by drawing the knife across the corner of the grinding wheel. To prepare for grinding the bevel, you need the cutting edge parallel to the back edge.



A block makes the bevel. A scrap of wood clamped to the grinder table sets the angle of the bevel. Buchanan moves the blade left and right with moderate pressure against the stone.



Now grind behind. Buchanan hollow-grinds the back of the knife—leaving a narrow band at the tip—to simplify honing it flat.



HONE THE EDGE

Flat in the back. Starting with a coarse stone and progressing to 8,000 grit, Buchanan flattens the back of the blade.



Hone the bevel. Progressing again from coarse to fine, hone the bevel by taking up-and-back strokes while gradually moving from left to right along the blade.



Strop session. On his bevel-up drawknife, Buchanan works the back of the blade with a leather-covered block to create a slight back bevel that makes the blade easier to control.

know how to sharpen a bench chisel you have the necessary skills. To get started, look closely at your knife. Has some numbskull used a hammer on the back edge? If so, file the dings out so it's smooth again. Now check to see if the back edge and the cutting edge are parallel. If not, joint the cutting edge on the grinder until they are. This is important, since when you grind the bevel you'll reference off the back edge.

To grind the bevel, adjust the grinder's tool rest to a flat position and clamp a stop to it. The motor will likely prevent you from grinding across the front face of the stone; instead you will grind on the edge of the stone. Adjust the stop until the grinding wheel is hitting the bevel at a 28° angle. (This angle works for bevel-down drawknives; for bevel-up knives, grind the bevel at 25°; the back bevel will add the other 3°.) Wax the stop block so the drawknife slides smoothly across the wood.

I hollow-grind the back of the blade to speed up the honing process—this way there's less metal to remove to achieve a flat surface. Reset the stop block and grind to within about $\frac{3}{16}$ in. of the cutting edge.

With the grinding finished, rub the back of the blade on a coarse stone. After you reach the cutting edge, switch to progressively finer stones to get a mirror finish. If the handles

Bevel up or bevel down?

BEVEL UP



Flat and true. For cuts that produce a long, flat, smooth plane, work with the bevel up (left). Skewing the blade while pulling straight creates the smoothest cut and most control (right).



Split the rings.

One of the drawknife's great attributes is its ability to ride right down the wood's growth rings, creating a workpiece with grain that's perfectly continuous from one end to the other.

BEVEL DOWN



Cutting in. Working with the bevel down enables you to make scoop cuts into the workpiece without losing control.



Down for delicacy. Buchanan prefers working bevel-down for fine tasks like faceting a spindle.



Make end grain glisten. With the bevel down and the knife sharp, cut end grain so cleanly it shines. This also works bevel-up.

get in the way of the honing process, mount your stone on a block so the handles will clear.

To hone the bevel, flip the knife over, place your fingertips on the back just opposite the bevel, and work your way up through the grits. When you reach the finest stone, alternate honing the back and the bevel until the burr falls off.

For a bevel-up drawknife there is one more step—the back bevel, or dubbing, on the back side. Without the back bevel, the knife will tend to dive into the workpiece. The trick is to create the minimum back bevel necessary to make the knife work. If the back bevel's too big, resharpening will be a problem. I use a piece of leather glued to a wooden block and charged with slurry from an 8,000-grit stone. During stropping, keep the block flat on the back of the blade, but place extra pressure on the cutting edge. Because the leather is soft, this should roll the edge just enough so the knife works well yet permits resharpening time and again.

How to hold a drawknife

For some drawknife work, I use a shaving horse to hold the stock. For other work, I use a vise. Use whichever best suits you and your situation. However the stock is held, you will usually be holding the knife at a skewed angle while slicing the cut. Use as much blade as possible. This skewed action takes less power and gives more control. You can also gain control by locking your joints—wrists, elbows, shoulders—as you work. Loosen these joints and you'll have less control but more power.

When I'm roughing out spindles, for example, my joints are loose as I cut fast and take long strokes. To make the careful cuts defining the edge of a seat, though, I'll shorten my stroke and tighten my joints, obtaining fine control with slight wrist movements. □

Curtis Buchanan builds chairs and carves spoons and bowls in Jonesborough, Tenn.

One versatile tool



A natural at complex shaping. Used bevel down, the drawknife can create complex shapes with speed and precision. Here Buchanan carves a guitar neck.



Smoothing tool too. Working bevel-up, Buchanan uses the drawknife to smooth the bandsawn curves of a cabriole leg.



Stopped facets. Working on the leg of a table, Buchanan creates tapered facets that are stopped at the top end.



Give me an arm. With the workpiece in his bench vise, Buchanan shapes the end grain on the arm of a Windsor chair.



Deep scoop. The bevel-down knife allows Buchanan to make a deep incut on the side of a chair seat.