

Side Sharpening

You can sharpen freehand with quality results if you remember that wider is better.

by Harrelson Stanley

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There are dozens of books and literally hundreds of articles on how to sharpen a plane blade. So what do I have to share with you that's any smarter or more insightful than any of these other sources? Simplicity.

For me, sharpening is just as much fun as planing. I really don't find it to be drudgery at all. I think that's because I have a system that responds to my needs as a woodworker. An important part of that system is side sharpening. Trying to balance the blade on its narrow bevel while sharpening is asking for trouble. It's much easier to sharpen using the width of the blade to support the bevel.

Along with side sharpening, keeping your stones flat as you sharpen, properly removing the burr, and another step that I call jointing the edge, all combine to make a simple and efficient system for sharpening plane blades.

Flat Backs Make Sharp Edges

The first time you sharpen a blade it's important to flatten the back of the blade correctly. This is a one-time step. If you get it right the first time, you won't have to do it again for a very long time.

But before you put steel to stone, it's important to make sure each grit stone is flat. I use a diamond lapping stone for this step. Just a dozen or so passes with the diamond stone on each stone prior to use ensures that you'll be working with a flat surface.

To flatten the back, start with the #1,000 grit stone. Start with the edge of the back (I feel it's only necessary to flatten the first 5/8" of the blade), rubbing back and forth along the edge of the stone.

Keep your left elbow down low, perpendicular to the stone so that the rubbing motion is a smooth back-and-forth motion rather than swinging up and down. This keeps a constant, even pressure on the blade.

Now before I offend some of the readers, if you are left handed, or if you just prefer the feel of reversing the hand locations for this process, please feel free; it's an ambidextrous method.

This process is repeated through the multiple grits until you've achieved a clean, flat and polished surface. For the best results, I recommend working through all seven grits (#1,000 to #16,000). While you might think it takes less time to use fewer stones, you end up having to work harder to remove the scratches at each level.

Sharpening The Bevel

Now you're ready to sharpen the bevel. To get the bevel right



While a necessary step when first preparing a plane blade, flattening the back face only has to happen the first time and rarely thereafter. Start with the #1,000 grit stone, flattening the first inch or so of the blade.

you need to perfect some body mechanics, much like you perfect a golf swing. Once you perfect this easy-to-learn motion, you'll be able to use the side sharpening technique to master free-hand sharpening without years of practice. **fill**

First, I hold the blade in my right hand in a loose grip with the tips of my fingers, with the tips spread around the blade – rather as if I'm imitating a spider. My left hand is laid flat on the back of the plane blade, parallel to the edge. **fill**

I position my body slightly to the left of parallel with the stone, and with my head positioned out over the blade.

I'm using my left hand in a pushing motion across the stone almost like using a hand saw, swinging my arm, not my body. I keep my left arm rigid from the tips of my fingers all the way up to my elbow. My right hand is used only to support the blade; the left

GRIT PROGRESSION

As you work through the multiple grit stones you remove the scratches left from the prior stone. The photos below show the scratch progression as the back is flattened and eventually polished.



#1,000 GRIT



#2,000 GRIT



#4,000 GRIT



#8,000 GRIT



#16,000 GRIT



An important part of the side-sharpening process is to grip the blade correctly. The blade is grasped loosely in the right hand, held just by the fingertips.



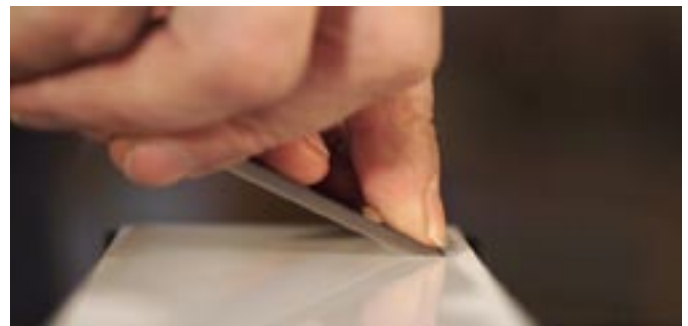
The right forefinger is held in position at the right front corner of the blade to steady the blade and provide balance.



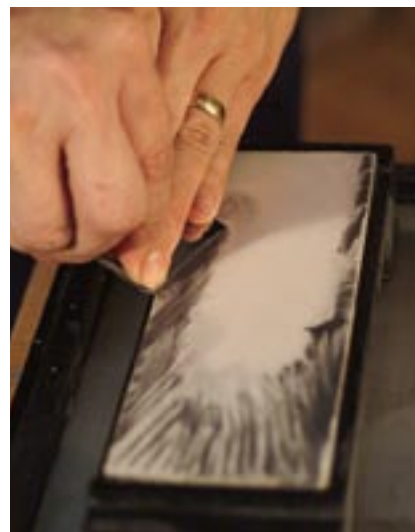
The left hand provides all the support on the bevel. The hand is spread across the width and parallel to the blade edge. The left arm is held rigid from finger tip to elbow.



Body position is important as well. I'm standing with my head positioned directly over the blade. This puts my line of sight directly in line with the blade tip and where I'm sharpening.



As you prepare to sharpen the bevel, the right hand is once again loosely holding the blade, providing light support with the bevel flat against the stone. Seat the bevel on the stone. Your right hand is only supporting and balancing the iron, not applying pressure.



While ceramic stones cut quickly, they also wear slightly faster. Because of this, it's important to work to keep the stone's surface as flat as possible. By working around the perimeter of the stone and actually pushing off the stone, you'll use more of the stone, and not dish the center of it.

Here is the circular pattern that I recommend. I tend to work in a clockwise pattern, but if counter-clockwise feels more comfortable, that will work as well.

arm is doing all the work.

This is from where the term "side sharpening" comes. Rather than sharpen the bevel by pushing the blade in the direction you would when making a cut with the blade (and thus contacting the stone with only a small amount of metal), side-to-side sharpening

allows you to use the more substantial width of the blade to support the bevel as you sharpen.

Seat the bevel flat on the stone and then start making short side pushes along the perimeter of the blade to come off the edge of the stone. By working only on the

perimeter, you avoid dishing the stone in the center, which can cause problems with the blade edge. **fill**

After working through the first (and every) grit, you want to check for the burr that is formed as the steel is rolled over the edge. This is fatigued metal and needs to be

removed. I use my #16,000-grit stone and make a few passes on the flat back of the blade along the length of the stone. That's enough to shear off the burr.

One other step that I add between grits is a what I call a jointing pass. Even with the burr removed, there are microscopic



After sharpening the bevel with each grit stone, you will develop a wire-edge burr on the back side of the blade. I check the burr by running the blade over my fingers along the length of the edge, never across the edge. This burr is fragile and if you run your fingers across the burr you stand a good chance of breaking the burr off leaving a very “toothy” edge that is more difficult to sharpen effectively. It’s best to shear the burr off, leaving a clean, even edge.

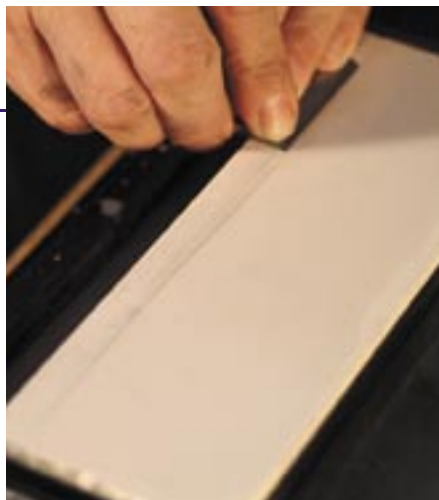
teeth left on the edge of the blade. By making two light passes over my #16,000 grit stone with the blade held perpendicular, the teeth are effectively removed, much like a jointer removes the rough parts of a board.

As you move to the polishing stone to remove the burr, remember to wipe the blade first to remove the coarser grit slurry that remains on the blade from coming in contact with your polishing stone. Otherwise you’ll scratch the polishing stone and undo much of the polishing work you’ve accomplished (not to mention potentially damage the polishing stone).

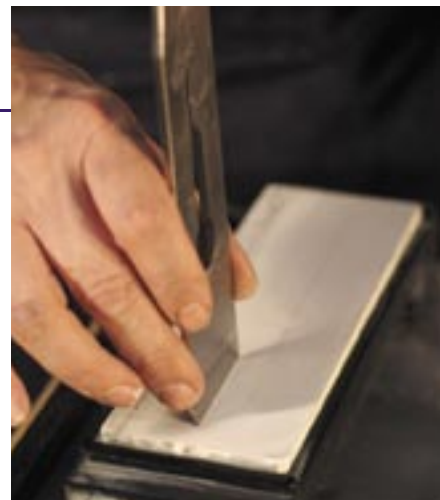
Now I’m ready to move to the next grit and repeat the procedure. **(Harrelson, join between each grit?)**

As you finish with the last grit, make one final short and light jointing pass on the edge of the blade, barely kissing the stone, to remove the last bit of tooth.

Once you’ve flattened your blade (once), and become comfortable with the side sharpening process, it should take you no more than three to five minutes to put a new sharp edge on your plane blade. So little time – yet you’ll get your plane cutting thin wispy shavings every time! **PW**



To remove the burr, run the back of the blade flat along the polishing stone (#16,000 grit) lengthwise a few times. By running the blade lengthwise, the burr is sheared from the blade, rather than broken free.

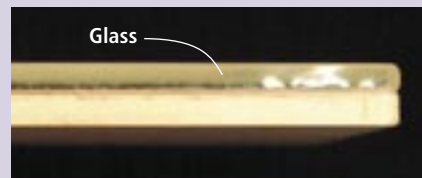


Even after removing the burr after sharpening with your finest grit stone, you can feel a slight “tooth” to the edge. This is normal, but not advantageous. A step I’ve added to my sharpening is to remove that tooth by running the blade on edge, lightly along the length of the stone. You’ll feel the difference instantly.

NEW SHAPTON STONES ARE MORE AFFORDABLE

The only complaint you ever hear about Shapton stones is that they are pricey. And it’s true that they are more expensive than the Norton waterstones, though the Shaptons also wear more slowly in my experience.

Now there is a more affordable line of Shapton stones available that are very close in price to the Nortons. These new Shaptons are thinner (5mm compared to 15mm) and are fused to glass for rigidity. According to our price comparisons at press time, the new Shaptons will be just a few dollars more than the Nortons, and available in a wider variety of grits (#220, #1,000, #2,000, #4,000, #6,000, #8,000, #16,000 and #30,000). I’ve been using the new stones for a several months and am quite impressed. They wear very slowly and cut quickly – just like the thicker Shapton stones. Most home woodworkers will be hard pressed to wear out one of these 5mm stones in their lifetime.



The glass backing strengthens the thin layer of sharpening medium.

I think these new Shaptons really narrow the gap between the two brands – though who knows how prices will fluctuate as market forces kick in. In any case, take a hard look at the new Shaptons. It’s high quality stuff and now at a more reasonable price.

The three stones I used the most were the #1,000 grit (\$42.95), the #4,000 (\$55.95) and the #8,000 (\$79.95). For more information, visit shaptonstones.com or call 877-692-3624.

— Christopher Schwarz

In the more affordable line of Shapton stones, stones are available in eight different grits. One nice perk of the new stones is the grit of each stone is clearly visible through the glass on the back.

