

Q A perfectly straight handsaw is a thing of beauty and a joy to use, but how key is straightness in terms of performance, and is there any practical way to restore true “factory” straightness to a handsaw?

A Matt Cianci, owner of The SawWright, in Warwick, R.I., responds: In terms of performance, the importance of perfect straightness in a saw’s line of teeth is a bit overstated. I know people who won’t even pick up an old saw if the blade is anything less than laser straight. But in my experience, perfect straightness isn’t necessary to make straight cuts.

If the saw blade has a gentle bow in one direction, then the saw can still cut very true. In fact, most handsaws will not suffer performance issues because of a curved tooth line (contrary to popular belief). And believe it or not, the same holds true for backsaws.

Cutting problems usually arise when the saw blade warps back and forth, curving from one side to the other and back again. However, the problems are not so much about straightness of cuts as they are about the need for a heavier tooth set to keep the blade from jamming in the wood during use. This heavier set makes the saw remove a lot more material, which makes it cut more slowly and less efficiently while requiring much more labor by the sawyer. My recommendation is to try out a saw, if you can, before you decide to buy it. You may be surprised with the result. A \$5 flea-market saw might get overlooked by collectors, but it can be a gem to use.

As far as whether it’s possible to restore true “factory” straightness, the answer is “maybe.” It depends on the saw. If the blade has a bow in one direction, then it is possible to correct the tension on the longer side of the blade (the convex side) to bring it back straight, by cold hammering or “smithing.” I use a hammer with a broad, subtly domed face and an anvil. There isn’t much available on this technique and most people learn it through trial and error, the way I did years ago.

Kinks in a saw blade can never be completely removed because they are work-hardened areas of the steel. Once steel is work-hardened or creased in this manner, the only way to correct the problem is with heating, forging, or regrinding, which is just not practical with an old saw. However, kinks can be compensated for by the smithing process I spoke of above. In this instance, the aim of the smithing is not necessarily to remove the



Looking down the handsaw blade, the kink must be taken out for proper performance (top). In most cases, “smithing” with a hammer and an anvil can straighten a handsaw blade (above).

kink, but rather to compensate for it by adjusting the tension on the blade so that the tooth line is pulled back into a straight line. I perform this operation often on saws with kinked or creased blades, and I can usually turn a nonfunctional saw back into a good performer.

Is this practical? I think so—if I learned to do it, then anyone with the right hammer and anvil can do it as well. It just takes time, willingness, and a passion for the feeling of cutting with a well-tuned handsaw.