

This article is from the Guild of Book Workers Newsletter. It includes an article from Hewit's Newsletter and commentary on that article

Tips & Techniques
How to Modify a Spokeshave
For Paring Leather

From the J.Hewit & Sons Ltd.
Newsletter

Over the years, we have sold numerous spokeshaves, but until relatively recently, had rarely been asked how a spokeshave should be modified for use before paring leather. So following numerous requests from customers, we decided to post a message to the Internet's Book Arts List requesting advice on this perplexing question. We had a number of very helpful responses and have decided to put them together here to give what we believe is a concise and definitive description on "how to Modify a Spokeshave for Paring Leather." We gratefully acknowledge the contributions of KenBrownlow, Don Drake, Rodney Fry, Mia Leijonstedt and Shelagh Smith without whose help this article would not have been written.

Spokeshaves were invented by wheelwrights, as their name suggest, as a tool for hand shaping the spokes on the wooden wheels of carriages and wagons. The modern spokeshave hardly differs from those of days gone by. However, it will not work on leather without some modification.

There are tow parts to the modification process, as both the blade and the spokeshave body will need to be altered. The following applies for the more common Stanley N.151 model, but

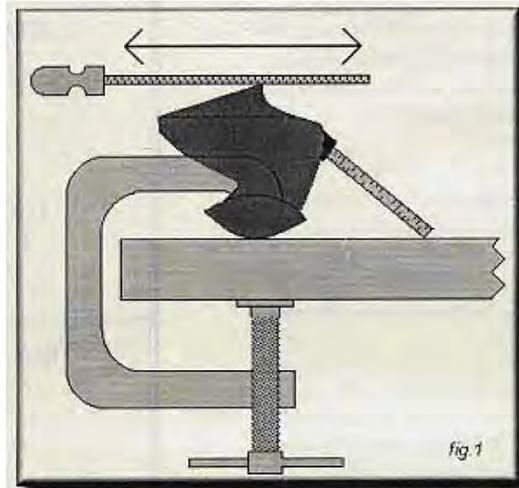
the information provided is pertinent to all models of flat-based spokeshaves.

The Spokeshave Body

Disassemble the spokeshave and clamp upside down to a bench clamp using two G-clamps. (see fig. 1) The bottom surface of the body, i.e. the part that is now uppermost, needs to be filed flat and parallel to the bench. This may be done with a large, flat engineer's file and should give an angle to the blade of approximately 30 degrees.

When bought, the slot aperture in the base of the spokeshave is too narrow and will need to be enlarged to prevent the leather shavings from clogging it up. The slot will need to be increased to about 5mm (3/16"), carefully filing away from the leading edge.

It is worth taking time finishing off these two processes by smoothing grinding on a sharpening stone until the surface is shiny, a sign that the face is free of irregularities. If available, a diamond stone is preferred as it retains its flat shape for longer.



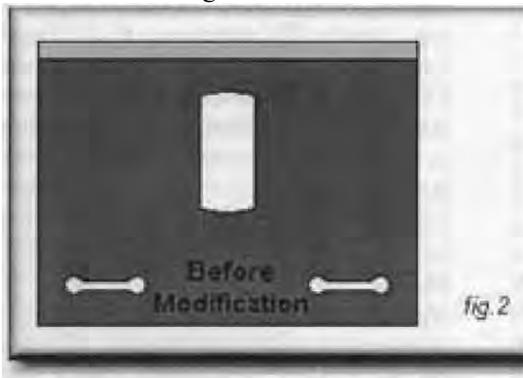
The Blade

Since the metal on the steel blade is much harder than that on the cast iron body, a degree of patience will be required for the next step. The bevel

edge on the blade is supplied with an angle of approximately 30 degrees. The bevel edge needs to be ground down to a more acute angle of about 10degrees. If you have a grinding machine, the job will be relatively easy. If not, you will need to be patient and use a coarse stone. A way of judging this angle is that when finished, the line from where the bevel starts will need to be about 3mm (1/8") from the oblong hole of the blade. (see fig.2)

The sharp corners of the blade will need to be rounded-off, to prevent them from snagging on the leather when paring. Each corner is slightly rounded for a length of about 6mm (1/4") so that the sides of the blade are not visible when looking along the bottom edge of the spokeshave.

Finally, the blade will need to be made very sharp. The final edge should be honed by using a fine Arkansas stone or a 5000 or 6000 grit stone.



Reassembling the Spokeshave

When reassembling the spokeshave, it is important to ensure that the blade is replaced in the correct way for leather paring; that is with the bevel side down, the opposite way in which you would expect to use a paring knife. Please note that this is also most probably the opposite way to which the spokeshave was supplied to you.

Use the adjusting screws to make the blade protrude just slightly from the bottom surface, and set the blade so that paring is done by the center of the spokeshave.

**SOME COMMENTS ON THE
SPOKESHAVE MODIFICATION
ARTICLE
Mark Esser**

Grinding a longer bevel on the blade is the most important step. I increase the bevel to about 15degrees, rather than 10degrees as specified in the article, but this is probably not an important difference. The technique for gauging the correct bevel angle suggested in the article, i.e., measuring the distance from the beginning of the bevel to the oblong hole in the blade, does, however, seem problematic. It assumes that the length and thickness of the blade and the



placement of the oblong hole never vary, and could easily lead to mistakes in the event that they do. I don't round off the corners of the blade as described in the article, but instead grind a slightly rounded shape across the entire edge. The principle is the same, and, on the face of it, I see no reason to object to the corner rounding approach.

Modification of the sole of the spokeshave, to hold the blade at a

shallower angle, is, in my opinion, the next most important modification, and it is described very well in the Hewit article.

Opening the mouth is also outlined well, though I would caution that inadvertently opening the mouth too much can lead to problems. The leading edge of the spokeshave body stretches the leather in front of the blade for a clean cut. If the gap is too wide the leather can begin to ruck up a bit in front of the blade and not cut as cleanly. Also, the outer edge of the leather can be released too soon, flip up in front of the blade, and get sliced off.

Following are a few points not covered in the spokeshave article:

- I like to ensure that the blade is making good contact where it rests on the body of the spokeshave. This surface can sometimes be slightly warped or have thick irregular blobs of paint on it. The same is true for the clamp that holds the blade from above. Both surfaces can be filed flat as necessary. If the blade is not being held firmly across its entire width it can, I believe, vibrate or chatter a bit and thus not cut as cleanly as it would otherwise.
- I sometime file the slot in the clamp a bit longer, allowing the clamp to hold down the blade at a point closer to the cutting edge. The principle is the same as that above. I.e., attempting to reduce vibration or chatter.
- About a year ago I tried using a replacement blade from Hock Tools. It is a wonderful improvement, and is much better than the Stanley blade. It is, however, thicker and made of much harder steel and consequently, is more difficult to modify. The Swedish Tormek grinder, which I was able to use at North Bennet Street School, does the job effortlessly.

- Finally, I wrap the handles in leather. I've always found that a car that has just been washed and waxed seems to drive better, and that's about the same effect that the leather wrapped handles have on the performance of the spokeshave.