CROWN TOOLS

HANDMADE IN SHEFFIELD, ENGLAND

Instructions for the Melvyn Firmagerc 1/16" (1.6mm) Shaper/Parting Tool

Called a Scraper/Parting Tool - because not only is it a great parting tool, but it's also a brilliant shear scraper.

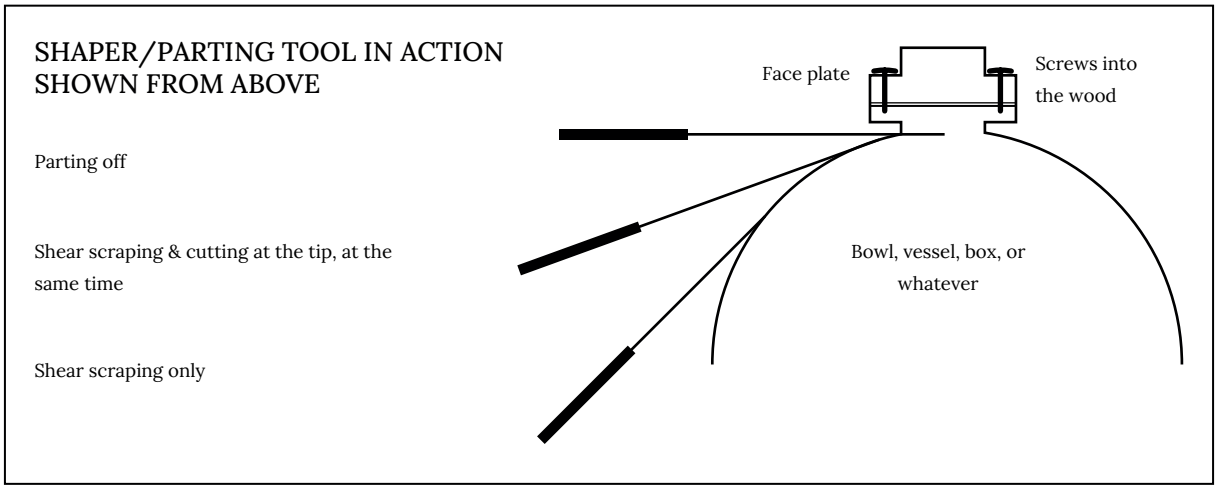
PARTING TOOL

Keep the tool vertical with the hollow grind on top, and horizontal from tip to handle. Plunge into the wood in the normal way as you would use any parting tool.

⚠ It is advisable to avoid dropping the handle to engage the bevel at the tip of the tool, as this will cause the tool to grab and become unstable when seriously parting off.

The tool only being 1/16" wide allows for the finest of parting cuts, wasting minimal wood between the base of a bowl, vessel, or other turnings, and the screws holding the wood. Also, ideal for parting the wood for the lid of a box. As minimal wood is removed, grain matching is maintained. The down side of the tool being so narrow is that it is liable to flip laterially if not held vertical and with a good over-hand grip. Practice on waste wood to start with, and to get a feel for what the tool is capable of - the good and the bad. It is also advisable to keep the tool rest as close as possible to the wood, to avoid unnecessary tool over-hang.

When parting it is advisable to hold the tool fairly tightly concentrating the grip in the hand, avoid tension into the arm, elbow, and shoulder, maintaining fluid control whilst resisting and grab or snatching. Keep the hand on top for the most stable control.



SHEAR SCRAPING

Shear scraping is achieved by using the tip edge of the hollow grind with the side of the tool acting as the bevel, which is kept in contact with the wood whilst the edge takes the finest shaving. It is vital to keep the side/bevel in contact, and the tool kept close to vertical. If the bevel leaves the wood because you have rolled the tool over you will get torn grain and risk a dig-in.

⚠ Under no circumstances think of the hollow grind fitting the shape of a turning - holding it horizontal to the wood or flat on the tool rest. Whilst it is unlikely the tool would shatter, it is too risky to take such a change. The tool is made of very thin HSS, and must be kept vertical.

There is a contradiction here as scraping implies the bevel is off, cutting implies the bevel is on. Well the action here is very much that of a scrap, but with the bevel in contact.

It is also possible to use the tool off the tool rest, upside down with the hollow ground edge trailing, to get the finest shaving you can possibly imagine. This works incredibly well with very wet wood.

A FLUTED TIP

If you wish to grind a flute into the tip of the tool to improve the quality and speed of cut, angle the tool to the corner of your grinding wheel. This little flute can be used to great effect for improving the surface quality of parting off and shaping, and used on really dense clean cutting woods such as ebony and box wood to make micro bead. You may well get good results creating micro beads with many other woods - and experimentation is encouraged. It also helps with widening the gap when the tool becomes grabby when parting off - a light skim using one of the points is all that is needed.

Grinding this flute will require a well defined corner on your wheel to achieve a satisfactory result. It works well with the ruby wheels, as they do not wear away too quickly.

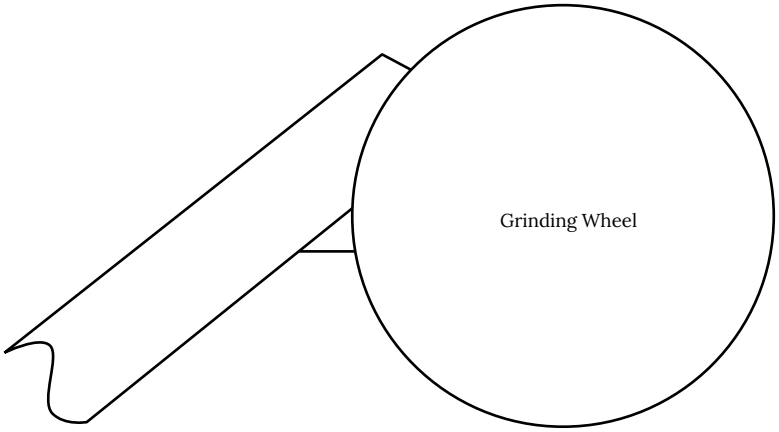
A ROUND TIP

A radius can be ground on the tip to make a micro round tip shaping tool. Just pushing gently into a dense wood will give you a miniature cove. To make it slightly larger roll the tip gently into the wood maintaining bevel contact just as with a gouge. Indeed it behaves just like a gouge. The rund rip is ideal for creating very tight returns - creating a foot, or tight radius in the neck of a vessel. It is used just like a gouge, bevel contact - rolling and swinging to achieve the radii.

SHARPENING THE TOOL

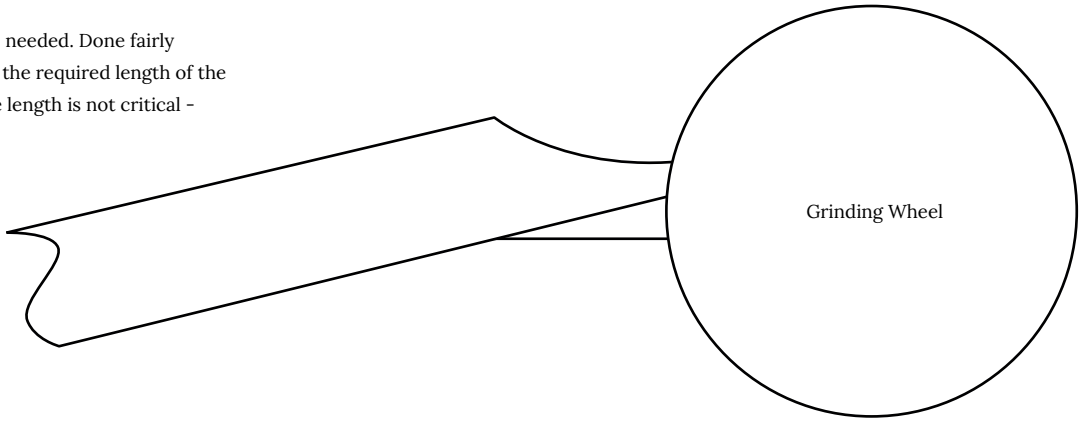
Place the tool upside down so that the hollow grind fits the wheel. When you first sharpen it, it is unlikely to fit, so gradually grind a little each time you sharpen until it fits.

Keeping the hollow ground well back makes for a fast cut. If you allow the hollow to become too short and steep, the cut will slow down considerably. From the tip to the other end of the hollow grind it should measure around 40 to 45mm.



SHARPENING THE TIP

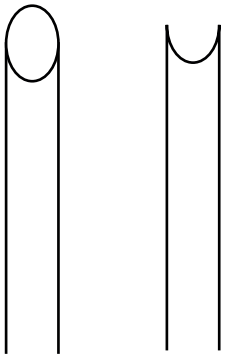
This can be done as needed. Done fairly regularly maintains the required length of the bevel at the tip. The length is not critical - around 5 to 10mm.



ROUND TIP

To grind requires a very gentle approach, as you swing the handle around - hardly touch the wheel at all. Indeed you may find it better to switch the grinder off and grind as it slows down. This takes some practice!

You may be tempted to use a stone or a diamond file to round the tip. This is not recommended as it requires a hollow grind to cut the wood efficiently.



FLUTED TIP

Go to the corner of your grinding wheel. The wheel needs to be well defined at the corner to work. Some white wheels can be too soft to do the job. Ruby wheels work very well. You'll need to experiment.

Melvyn would like to give recognition to Pete Young for the idea of the hollow grind and Mike Tingey for the flute. A number of people have played around with reciprical power saw blades for many years. This tool is the safest and most versatile culmination of that development. Melvyn was using such a tool back in 1981, a year after he first started turning, and had no idea others were doing similar, but different things. A wonderful world we live in!

A MESSAGE FROM MELVYN

> I have been using this tool for many, many years, and so have hundreds of my students with great success. I wish you the same success and lots of fun. It's vital to keep the tool sharp - put a new edge on very frequently. Crown Tools have done a great job with a neat handle and good finish.