

needs a lot of support under the edge since you don't have the secondary fulcrum of a bevel-rubbing tool to add extra support (your tool rest is the primary fulcrum). Unless your scrapers are 1/8" thick, this is a bad notion.

As a matter of fact, if I am using the tool at a scraping angle (with no bevel support) and the bevel inadvertently touches the wood, I can get a catch. I treat the bevels on scrapers as clearance angles, so mine are ground between 45 to 60 degrees. I also don't have to worry about single facets and a hollow grind on the ground bevel: I don't hone the bevel on these tools so it is not as critical as it is with other turning tools. However, grinding uniform bevels on these tools is great practice for all the tools to follow.

The process for sharpening is straightforward. After profiling, proceed to grind the bevel to match the profile. If you need some assistance early on in sharpening, set the tool rest angle to that 45- to 60-degree window. Start at the back of the bevel, keeping the tool flat on the rest, and progress along the cutting edge until sparks just come over the top. I don't look for a heavy stream of sparks, but consistent "tracer bullets" that tell me I have reached the cutting surface.

Being a scraper, the raised burr will be my cutting edge at least 90 percent of the time. I can use the burr right off of the grinder (useful if heavy stock removal is called for) or remove that burr with a flat stone and pull up a new burr with a cabinetmaker's

burnisher or the honing stone.

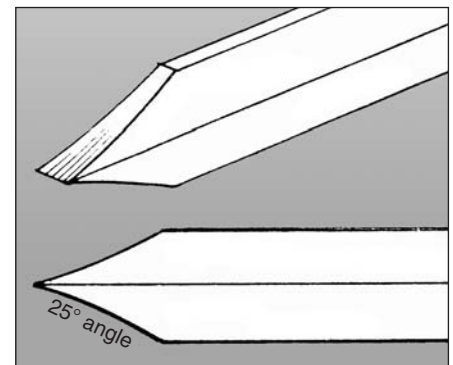
By using one of the other methods, I find it easier to produce different types of burrs—some for heavy work, some for fine finishing work. In those cases where the burr is too aggressive for a particular piece of wood (you may feel it "picking" at the wood rather than a smooth leveling action), try scraping with a sharp edge—produced by grinding—then removing the burr on top with a flat honing stone. This is similar to the action of scraping with the edge of a knife or the furnituremaker scraping the top of a table with a large piece of broken glass. When you work a sharp edge in a scraping action, it may quickly dull the edge. However for that window of doing fine scraping, it may be just the ticket.

Sharpening the cutting tools

Now we come to the tools that start to cause problems for beginners. These are tools that will cut with a keen edge and, in most cases, presented at a cutting angle with the bevel rubbing on the wood. Now we become fussy about angles, uniformly ground bevels, and of course, keen edges.

2. Parting tools

There are several variations of this tool, but the most common is a rectangular section of steel with the cutting edge in the middle that's ground on both sides. This is a great tool to learn cutting tool sharpening as it



Diamond-section parting tool (profile and angles same as rectangular tool)

has a relatively small area to grind (the edge is usually no greater than 1/4") and the edge is in a flat plane.

For profiling, make sure the edge is ground straight across, and the included angles of the ground bevels are around 25 degrees. Fortunately, new parting tools most often arrive profiled in an acceptable manner—not sharp mind you, but routinely shaped fine. To sharpen, either set the tool rest at the approximate angle desired, use the edge of the rest as a steady, or use your fingers to adjust the angle.

Start at the back of the bevel (called the "heel"), keep the edge horizontal, and lap from side to side on the wheel until you just see sparks trailing over the top of the cutting edge. Flip over the tool and repeat the same procedure on the other side. The objective is to produce a single facet with a slight hollow grind. If your movements are controlled and steady, this all happens. If jerky, uneven, inconsistent, too much pressure, "grind and look" and "grind and look," then things probably won't be so good.

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