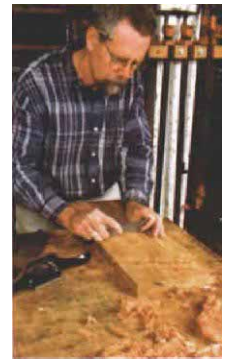
Rules of Thumb

BY PHILIP C. LOWE

The scraper can replace a stack of sandpaper



Tired of sanding? Fed up with the hours of drudgery, the clouds of dust and the high costs? There is one simple tool that can get rid of rasp, saw, gouge and milling marks, shearing away feathery layers at each stroke and leaving a smooth surface.

The principle behind the card scraper is simple: Take a piece of flat steel about the size of an index card. Polish an edge and rub it with a metal bar to create a sharp burr, or hook. Then flex the scraper slightly with your thumbs and push it across the workpiece at an angle that allows the burr to cut the wood.

Unfortunately, many woodworkers balk at the scraper, either giving up after one stab at sharpening and using it or not even trying at all.

But they are missing out on a dirt-cheap tool that can take the place of coarse and medium grades of sandpaper and can be cut or ground into an infinite variety of custom shapes to smooth inlay, moldings, cove cuts and most other curved and flat surfaces. Also, where sandpaper tends to round over nearby details, scrapers cut only where you want them to.

Scrapers come in many sizes and shapes. *Aside from the standard card and gooseneck shapes, you can grind custom profiles to fit everything from beads to coves and use thin scrapers to wrap around curves.*

Finally, the card scraper's width is great enough to overlap marks or undulations created by a handplane or cabinet scraper, making it the logical next step in surface preparation. In fact, the card (or hand) scraper is often mistakenly called a cabinet scraper, but the latter is a spokeshave-like tool.

Sharpening is not difficult

Sharpening, or burnishing, a scraper is actually a simple process. It takes a little trial and error to create a usable burr, but you have to learn it only once, and there are a few basic keys to success. Without a squarely honed edge to start with, for example, you won't get a razor-sharp burr later.

Whether your scraper stock is square or curved, large or small, the sharpening technique is the same. The first step is done on any previously sharpened scraper but should be unnecessary for a new one. With the scraper lying flat on the bench, the burnisher is forcefully dragged back and forth to flatten the previously turned burr.

The burnisher is made of hardened steel and ideally should be free from nicks and polished to a mirror finish. Burnishers come in a few shapes and sizes. I prefer a cylindrical shape with a conical point, but I believe it's no longer available. These days I suggest the triangular style that tapers to a point.

Leveling and honing the edge—The next step is to place your scraper in a vise with the edge to be sharpened parallel to the benchtop. Draw-file the edge using a mill file, directing your strokes along the length of the scraper. Hold the file at roughly a 45° angle in the horizontal plane. Give thought to filing the edge straight along its length and square to the sides.

Honing the edge follows. This achieves two things; It removes any file marks and brings the edge to a polished surface, square to its sides. Honing and polishing are done on three surfaces: the narrow edge and the two flat broad sides. I suggest starting with a coarse stone to remove file marks followed by a finer-grit stone. The finer these surfaces are polished, the sharper the edge.

Burnishing—At this stage the scraper is placed back in a vise with the edge to be burnished parallel to the top of the bench. Begin by

JOINTING THE EDGE

First, level the edge with a mill file. *Hold the file at about a 45° angle to the direction of the cut. Take care to keep the file square to the work through the entire stroke.*

Then hone each surface. *Start with the thin edge of the scraper, moving from a coarse stone to a fine one. Then lap the sides flat.*

Photos: Asa Christiana

BURNISHING

Creating the hook edge. *Start with the burnisher held 90° to the edge. Use firm strokes along the length of the edge, gradually angling the burnisher down to about 80° to create a smooth burr.*

drawing the burnisher across the edge, holding the tool at a right angle to the sides. Start with light pressure and increase it with each pass. This flattens any scratch marks left on the surface, again helping to achieve a sharp edge. After four or five passes at the 90° angle, tilt the burnisher slightly for the next pass, which compresses the corner, mushrooming it out along the edge. Do this to both sides of the edge, creating two working burrs.

You might ask what the correct angle is for the burnisher while creating the burr. Think of it this way: The greater the angle of the burnisher, the more you will have to tilt the scraper to get it to cut.

Your burnishing should be firm enough to feel a distinct edge on the scraper. If the edge gets rolled over too far, it can be straightened to a better cutting angle by placing the point of the burnisher behind the burr and dragging it along the inside of the hook, bending it back to a more pleasing cutting angle. This is why I prefer a burnisher that comes to a point.

Next, flip over the scraper in the vise and level, hone and sharpen the opposite side. At this point it's best to hold the scraper in the vise between two sticks, which prevents the newly burnished edges from being damaged.

Using a card scraper

The scraper can be held and moved across the wood in various ways. Typically, the scraper is flexed slightly across its length when used. This prevents the corners from digging into the surface. This bend is accomplished by pushing in the center of the tool with your thumbs and pulling with your fingers at the ends, creating an arc across the cutting edge. This is not much of a curve, just enough to lift the ends off the surface.

Tilt the scraper forward at an angle that will turn up a shaving, then push it across the work surface. You also can pull the tool. In this case, use your thumbs to pull off the ends of the tool from the surface and push the center with your fingers.

A word of caution: When a lot of scraping is done, a great deal of friction occurs, which will heat up the tool and can burn thumbs and fingers. Woodworkers employ a variety of tricks to avoid blisters. Some wrap tape around their thumbs. Others place flexible rubber refrigerator magnets on the back of the scraper. There are even holders designed to properly flex the scraper and shield your fingers from the heat buildup. But I have never had a problem using just my thumbs and fingers.

A common pitfall is focusing your efforts in one spot to remove tearout. This can lead to scraping a hollow into the surface of your panel. It may not be noticeable on bare wood but will stand out after a finish has been applied.

Some other useful applications for the scraper are removing file marks after shaping a cabriole leg, or fairing moldings once they have been mitered and attached. Straight, curved and gooseneck scrapers can be purchased, or you can cut and grind your own custom shapes.

Sometimes I take a scraper to a sheet-metal shop and have them shear off a piece to a particular width. Then, back at the shop, I grind it to suit a particular profile. A piece of an old bandsaw blade makes a good scraper blank. A narrow scraper can be wrapped around a curved surface to smooth it.

If you're tired of buying sandpaper and fed up with holding onto a loud power sander that feels like a beehive in your hand, try the scraper. It works great when sharpened correctly, and it keeps the dust down.

A MULTITUDE OF USES

A scraper can handle flat and curved surfaces and areas prone to tearout. *A flat scraper, angled slightly to create a shearing action, can level the inlay on a Pembroke table leg (left) and remove rasp marks on a cabriole leg (center). A gooseneck scraper smooths the cove in a bracket foot (right).*