

Custom Scrapers for Custom Work

Shopmade
scrapers smooth
tough-to-reach surfaces
without dulling sharp details

BY GARRETT HACK



Make them as you need them



Cut and shape the steel



Snip and file. Hack cuts small scrapers from an old Japanese handsaw blade (left). More robust scrapers are taken from thicker western saws. For a straight scraper, he snips it out of the blank, then cleans up the cuts with a file (above), holding the blank in a small vise.

Few tools are as simple as a card scraper, or as versatile and effective. It's just a rectangle of flexible steel with a fine burr for a cutting edge, but it can perfectly smooth the most ornery grain. I take that basic idea a bit further, making custom scrapers of all kinds. Typically these small tools, for working in tight places, have curved or angled edges, and most of the time no burr at all. These shopmade scrapers are some of my most useful tools.

Better than sandpaper

What makes a scraper so useful is its ability to cut a very fine shaving in any direction, against or with the grain, around curves as well as on flat parts, and to cut well at any angle to the surface. Scrapers can level flat surfaces and fair shaped ones. And a well-sharpened scraper cuts more quickly and cleanly than sandpaper, with more control.

My collection of custom scrapers can be divided into two categories: those with straight edges and those with curved edges. Straight edges generally work best on flat areas, such as when scraping squeeze-out from a joint or lightly leveling a surface after applying finish. Some of my straight scrapers have corners where the edges meet just shy of 90° to allow me to reach into tight corners easily.

My curved-edge scrapers can smooth any concave or convex surface, stepping in after a router or molding plane does its



Hone and polish. Hack hones the edges of the scraper on a fine diamond plate and a 2,000-grit waterstone. He polishes the faces first on a 2,000-grit waterstone and finishes with 5,000-grit. He polishes only the area near the cutting edge. For these cleanup tools, a burr is not necessary.



Adding curves



Trace the profile. After cutting the blank to size, use a fine Sharpie to trace the profile on it (left). Shape the profile with a file, then hone the edge and polish the faces in the same way you'd work a square-edge scraper (above). For hollows, you'll need a chainsaw file or jeweler's files to create the profile. Don't use a grinder with this thin steel, as it will ruin the temper.

Where small scrapers shine



Perfect a profile without losing detail

Small, intricate details are a signature of Hack's work. Trying to smooth rough spots with sandpaper would soften the crisp edges, so he turns to scrapers with custom profiles.

work. My most basic scrapers have simple round shapes for such tasks as fine-tuning a mitered corner in a cove molding. A few have a combination of shapes that fit a whole molding profile. They take longer to make, but they are especially useful for fairing and smoothing curved moldings. Oftentimes, though, I'll use a handful of different shaped scrapers on complex moldings instead of trying to file multiple shapes onto one tool.

Simple to make

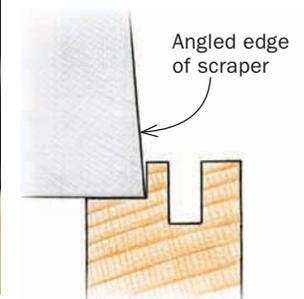
The steel I use to make my scrapers is the same spring-tempered steel of a card scraper. I use old handsaws for thicker, stiffer scrapers, and worn-out Japanese saws for thin and flexible ones. This steel is soft enough that it can be filed, yet hard enough to hold an edge. Strong snips work to cut the scraper to rough shape, and then files to get a final profile. Stay away from a grinder or you risk burning the thin steel and ruining its temper.

For the small shaped scrapers, I draw the profile I want on the blank with a Sharpie and file the steel to that line. If you are creating a scraper with a concave profile, you'll need some round files of different

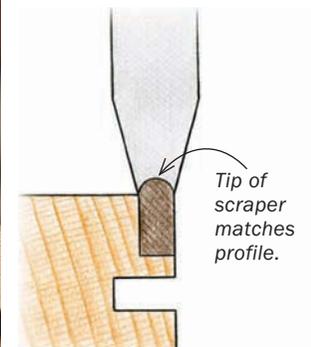


Coves and fillets. This curly maple molding had some tearout. To clean it up without losing detail, Hack uses a rounded scraper for the concave section (left), and a square scraper to finish the fillet (above).

Inside corners. To prepare for a glued-on bead, Hack uses a small scraper to refine the inside corner of a rabbet. One edge of the scraper is angled so the tip reaches into the corner without touching the wall.



Beadwork. This ebony bead is smoothed with a narrow scraper with a hollow nose that matches the bead profile. A light touch creates delicate shavings.





Clean up the cock bead. For this delicate job, Hack uses the straight-edge scraper to get the glue out. Again, the vertical edge of the scraper has a slight angle so it can reach into the corner without damaging the applied bead.

Make squeeze-out disappear without a trace

These small custom scrapers are easy to maneuver in tight spots, making them ideal for removing glue in areas that are tough to reach with chisels, planes, or bigger scrapers.

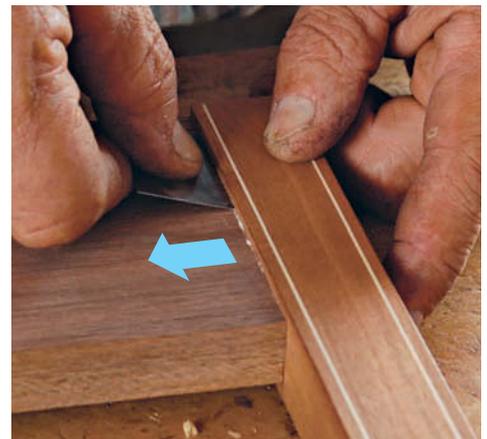
diameters. If you want a scraper to match a molding profile or part of it, trace the molding on the steel blank. As you file, make sure you maintain a square edge. When you're done, it should feel sharp even before you start to hone.

After filing the scrapers, I hone their edges using a fine diamond plate and a 2,000-grit waterstone. The most important part of the process is to keep the blank perfectly perpendicular as you hone, to ensure a square edge. At this point the tool already feels sharp and is able to make some shavings. I hone the faces of the scraper next, focusing my efforts near the cutting edge only. For this I use 2,000- and 5,000-grit waterstones.

I don't put a burr on these scrapers. They work very well without one. The scraper should produce delicate shavings, no matter whether you push or pull it across the surface. The only time I put a burr on my custom scrapers is if I need to take a more aggressive cut, say, if my goal is to alter the shape of a profile. A scraper's cutting edge never lasts that long, but honing it again to sharpen it is very quick.

Custom scrapers are a real asset to your tool collection. Try one, and before long you'll be making more of them and using sandpaper far less. □

Garrett Hack is a contributing editor.



Leg-to-apron joint. Squeeze-out on an inset apron is hard to reach, but a small, thin scraper is the solution. You can run it across the grain without damage (left), or scrape out the glue from the corner with the grain (right).



They work for finishes, too. Hack uses wider square-edge scrapers to remove dust nibs and other imperfections from tabletop finishes. A well-honed scraper will leave a glasslike surface.

Smooth finishes