

SCRAPE

A card scraper quickly removes mill marks and tearout, leaving a flat surface.

Foolproof Surface Prep

Scrape, plane, and sand for silky-smooth surfaces

BY BOB VAN DYKE

PLANE

A sharp block plane breaks the edges and creates crisp, even facets.

Careful surfacing is critical to the final look of any project, as even minor defects, from mill marks to tearout, will jump out as soon as finish is applied. I typically start this work on a piece by using a finely set smoothing plane because it's quick and leaves a flat surface. But I follow that with a card scraper where necessary and 320-grit sandpaper to blend and smooth the whole surface. A smoothing plane is a great tool, but it requires a considerable learning curve—not only to use effectively but also to sharpen and keep finely tuned. And even then, there are some woods that are close to impossible to plane well.

Another option is sanding up through the grits, a perfectly acceptable method widely used in commercial work. However, a good job takes more time and skill than many people realize.

Fortunately, there's a third way to achieve a shimmering, glasslike surface. With just a simple card scraper, a sharp block plane, and 320-grit sandpaper wrapped around a sanding block, you have a reliable method that's fast and nearly fail-proof.

A small tool kit

Van Dyke can smooth any wood to a perfect polish using a stripped-down kit with just the essentials: a scraper, a block plane, and some 320-grit sandpaper wrapped around a sanding block.

SAND

320-grit sandpaper reveals any flaws and ensures the surface is evenly smooth.

Start with the faces



SCRAPE

Proper form. Hold the tool as vertical as possible while still cutting, and bow it slightly. Press your thumbs together behind the cutting edge and keep them half on the scraper and half on the board.

TIP

Avoid holding the scraper over the top. You can't back up the cut with your thumbs, and tensioning is awkward. And with your hands not in contact with the board, you don't gain the necessary feedback.

Scrape and sand faces and edges

I usually start with the faces of a workpiece. This is the biggest part of the job and requires the most time—and a bit of finesse. The scraper makes quick work of surface defects, but it leaves a fairly rough surface. Following up with 320-grit sandpaper eliminates that roughness and reveals areas I missed while scraping, thanks to the fine sawdust that gets trapped in any defects.

While a card scraper is not as fussy as a smoothing plane, sharpening and technique are still crucial. I cover sharpening in Fundamentals, “How to sharpen a card

Scraping technique



LAND



PUSH



LIFT

Touchdown and liftoff. Don't try to force the scraper into the wood and then push. Instead, approach the cut gently and smoothly. After the scraper makes contact with the board, take light strokes with a skew cut. Finish by lightly lifting off the wood.

scraper,” (pp. 24–27), so here I'll discuss how to use it.

Start at the far end of the workpiece and work your way back, using light, short, overlapping push strokes. The scraper cuts with a small, sharp burr created using a burnisher. Bow the scraper slightly and hold it near vertical. To make light finesse cuts, it helps to have tactile feedback. So keep the edges of your hands, or even just a finger, in contact with the workpiece or the benchtop. Your thumbs should stay butted together behind the cutting edge, half on the scraper and half on the wood. To maintain feedback when scraping the edges, try to at least drag a finger along an adjacent face of the board.



WORK BACKWARD



Overlap short strokes for an even surface. Start at the far end of the stock and, using short, overlapping strokes, move backward while scraping into the section that you just finished.



MOVE THUMBS TO USE THE WHOLE SCRAPER

The whole edge is sharpened, so use it. Don't just keep your thumbs in the middle. Slide them along the edge to use the entire length of the burr.



SAND

Long strokes. Use 320-grit sandpaper to further smooth the surface left by the scraper. Van Dyke wraps his sandpaper around a hard felt-faced or cork-faced block. He applies firm downward pressure while taking long passes with the grain of the board.



Sawdust reveals imperfections. The powdery sawdust fills any tearout and leftover mill marks, making them easily visible.



RE-SCRAPE

Revisit any flaws. Don't just concentrate on the one problem area. Instead, feather out your strokes to avoid low spots, which stand out once finish is applied. After re-scraping, sand the area once more.

Edges are next



SCRAPE

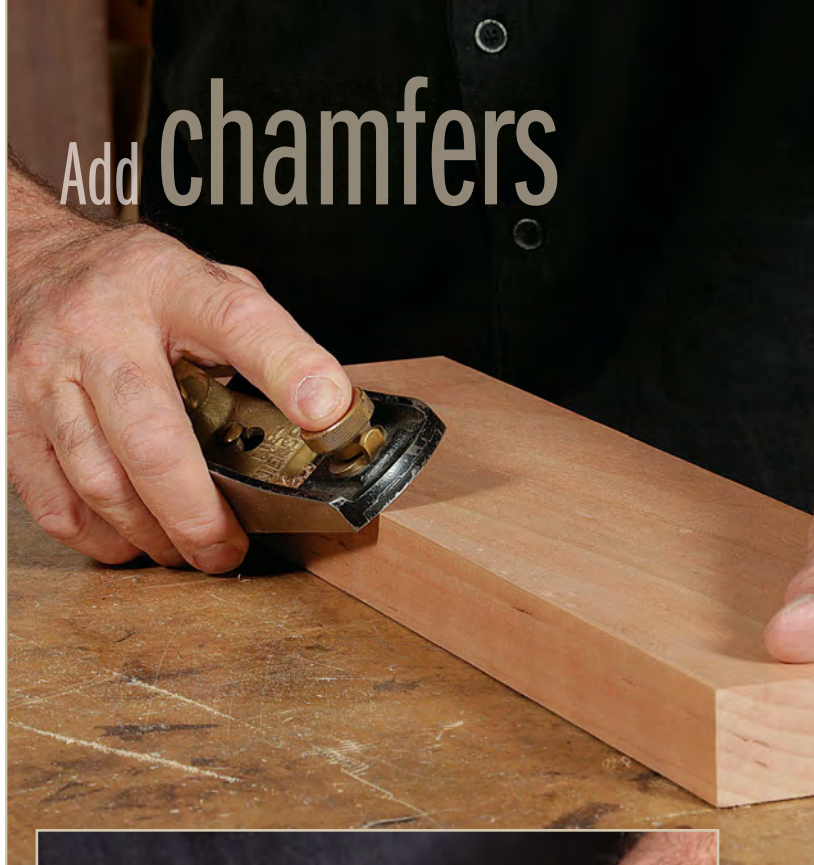
Scrape with care. Again, keep a part of your hand in contact with the board and use a light touch, especially when near the edges. A heavy touch here will destroy a crisp edge in a heartbeat.



SAND

Use your grip for control. Van Dyke uses his fingers like outriggers, letting them slide along the faces of the board to keep the sanding block flat and on track.

Add chamfers



PLANE



Lightly chamfer all edges. Skew a block plane when relieving the hard 90° edges. Take long, even passes for sharp, uniform chamfers.



SCRAPE

Yes, you can scrape end grain. A sharp burr and a light touch will yield excellent results. The chamfers you made will help prevent splintering the edges.

Add some chamfers

Before moving on to the end grain, break all the edges with a block plane. The light chamfer that the block plane leaves is subtle, feels good when you run your fingers over it, and can't be achieved with sandpaper alone. I use a low-angle block plane set with an ultrahigh microbevel of 45°, which ensures that I don't get any chipout. Follow up with two passes along the chamfers with sandpaper wrapped around a sanding block.

Scrape and sand end grain

Finally, smooth the end grain in the same manner. The idea of scraping end grain often surprises people, but using a sharp scraper and a light touch, it can be made just as glassy smooth in very little time. Make sure you scrape in from all sides so you don't splinter out the fibers on the edges. The chamfers from the previous step reduce this risk, but do not eliminate it. Check and blend the scraping, removing any rough fibers that remain with 320-grit sandpaper and a sanding block. The fine-grit paper will also reveal any flaws you may need to re-scrape.

Before you apply finish, check your surfaces with raking light. When they look evenly smooth, they're good to go. □

Contributing editor Bob Van Dyke runs the Connecticut Valley School of Woodworking.



SAND



Sand for glassy end grain. After sanding across the scraped ends, sand the chamfers in two strokes. Taking more than two or three passes will muddy the clean, even chamfers left by the block plane.