



Shavings, not dust. A well-prepared scraper works like a plane, cutting shavings and leaving a gleaming surface in its wake. Scrapers are available in different profiles and thicknesses.

Preparing a Scraper

*It's just a flat piece of steel,
but what a surface it leaves*

by Monroe Robinson

Many woodworkers think of scrapers as crude tools, good for little more than removing dried glue. Even those who use a scraper for surface preparation may think of scraping as an intermediate step between planing and sanding. And with the advice woodworkers are given, it's no wonder. I once read, for instance, that after scraping a surface, you could start sanding with 80-grit paper. Why bother? The truth is that if you're using a well-prepared, thin scraper, you can take off wispy shavings and get a surface as fine as you'd get from 400-grit paper—smooth, satiny, lustrous.

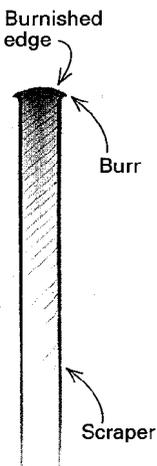
Planing figured woods and many hard, exotic species almost always is a frustrat-

ing experience. One time, I made a 12-ft-long table with a surface of bandsawn Macassar ebony veneers. The little grain swirls that make the table's surface so interesting could not have been planed without some devastating tearout. Flattening and smoothing that surface with a scraper gave me a flawless surface with no tearout.

I started with a thicker scraper, which removes a lot of wood in a hurry. I scraped the whole table down, right off the bandsaw, in about as much time as it would have taken me to plane it. I filled several 30-gal. *garbage* cans with the shavings from that project. Then I followed with a thinner, conventional scraper, leaving a surface that was ready to finish. But this kind of performance is only possible with a scraper that's been properly prepared.

A well-prepared scraper

What you're trying to achieve when you prepare a scraper are four perfectly honed 90° edges. The edges are rolled over with a burnisher just enough to create a slight burr (see the drawing below). This burr works like a miniature plane, cutting the



wood fibers cleanly—creating shavings, not dust. A well-prepared scraper works for hours and will take a dozen or more new burrs before it must be re-honed. The photos and drawings on these two pages explain how to prepare a scraper in detail. It takes me about 10 minutes to prepare a new scraper. Re-honing an old one takes five minutes or so.

If the scraper's edge (or the $\frac{1}{4}$ in. or so on either side of the edge) isn't perfectly polished, you won't be able to burnish the scraper more than a couple of times before having to take it back to the stones. Even the smallest scratches and nicks will yield an edge that, on a microscopic level, is ragged and weak.

When I was learning to work with scrapers, I found it helpful to look through a hand lens (available in most art-supply stores) at the sides and edges of the scraper. I studied the relationship between what I was doing and the results I was getting. When I got a good, sharp, long-lasting burr, I knew why. When I didn't, I usually could figure out why not.

What about burnishers?

Just as important as the polish on the scraper is the profile and polish of the bur-

PREPARING A SCRAPER



Flatten the scraper's sides. Apply pressure to the $\frac{1}{4}$ in. or so next to the edge. Because you're just removing scratches and millmarks, stop with a medium waterstone (soft Arkansas for oilstone users).



File the edge flat and square. To avoid a belly on the edge, take two or three strokes at each end first. Then file the full length of the scraper. Follow with light passes with a smooth-cut mill file.

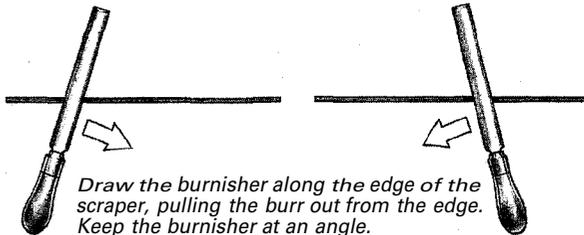
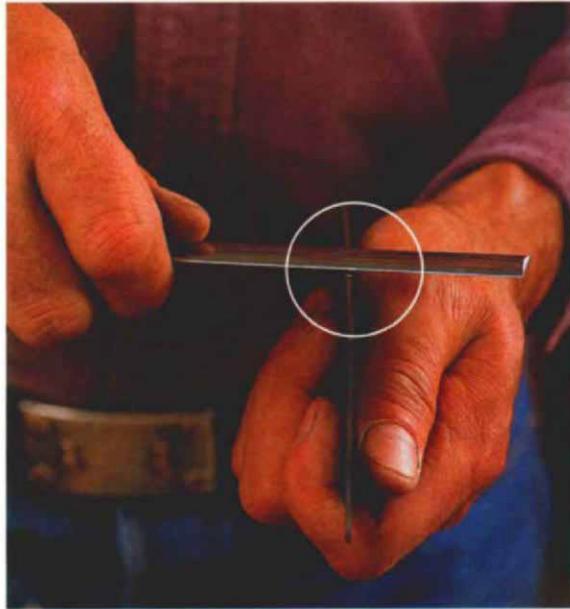
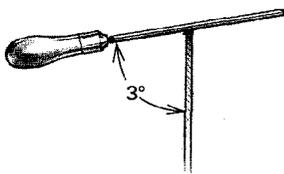
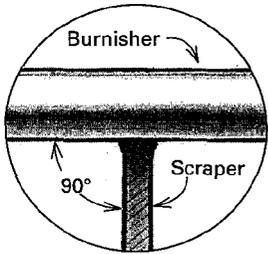


Hone the edge. Hold the scraper perpendicular to the stone and slightly flexed. Apply pressure, and move the scraper back and forth in line with the stone. For waterstones, take the edge to 6,000-grit or higher; for oilstones, finish up with a hard Arkansas.



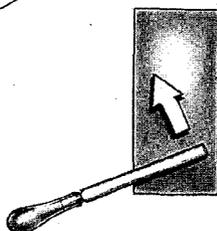
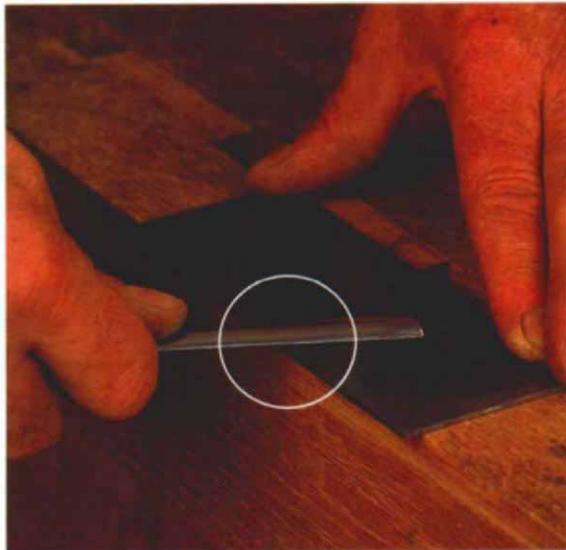
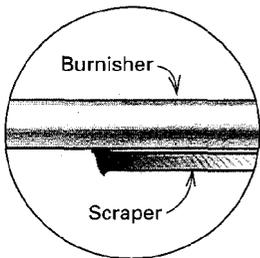
Hone the faces to remove the burr left from filing or honing. Start with a medium stone, and work up to your finish stone. Spread pressure evenly over the scraper.

Burnish the edge lightly. While holding the scraper in a vise or in your hand, burnish as shown in the drawings below. The first pass is perpendicular to the sides of the scraper. Gradually increase the angle until you're holding the burnisher at approximately 2° to 3°. An effective, long-lasting burr is very small.

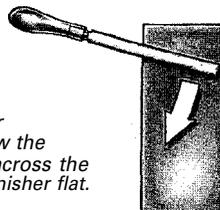


WHEN IT'S DULL

To re-burnish a dull edge, re-flatten the burr. Lay the scraper flat on the bench with just an edge overhanging. Draw the burnisher across the scraper diagonally, as shown in the drawing below, and keep the burnisher flat on the scraper, using only light to moderate pressure. Once you've flattened the burr, burnish the edge again.



To prepare the scraper for re-burnishing, draw the burnisher diagonally across the scraper. Keep the burnisher flat.



nisier. I use a burnisher with a profile that might best be described as a flattened oval. Its gentle radius distributes the pressure over a wide area, resulting in a long-lasting burr. At the other extreme are triangular burnishers, which concentrate all pressure on one tiny spot along the burr. With that kind of pressure on such a minute spot, it's easy to create a washboard effect or, worse, to fold the burr over the first time you burnish. Then you have to repeat the whole honing sequence.

I use a hard felt wheel charged with buff-



ing compound to polish my burnisher maybe twice a year. Whatever sharpening system you use, make sure your burnisher is free of any scratches, dents or nicks. Otherwise, the burr you're trying to create will be damaged.

Every time I read anything on scrapers, the writer recommends only certain brands. I use many brands of scrapers, and they all work well. Most scrapers on the market are made of hard steel and are fairly thin. I consider these to be finishing scrapers. I also use thicker, softer scrapers from Ski Kare (part #937SX, \$7.50 plus shipping, phone orders only; 800-525-5374). These scrapers are real wood removers, and their softer steel allows them to be re-burnished more times before re-honing. The surface they leave is still equivalent to 220- or 320-grit sandpaper.

Scraping tips

Burned thumbs are a common complaint. I once got some deep burns in my thumbs from hours of scraping. My solution is to use thimbles made of masking tape. They're not much to look at, but they work.

Burned or scraped knuckles are another common complaint. They're caused by holding the scraper at too low an angle. The scraper should be no lower than 45° to the wood you're scraping. If you have to scrape at an angle lower than that, you've either burnished the scraper with too much pressure or at too high an angle.

Monroe Robinson is a sawyer in Little River, Calif., specializing in custom sawing salvaged, old-growth redwood. He was a professional furnituremaker for 22 years.