



handwork

Camber: The secret to perfect planing

CROWN YOUR SMOOTHING PLANE BLADE, AND SAY GOOD-BYE TO SANDPAPER

BY CHRIS GOCHNOUR

tracks

The problem: tracks

A smoothing plane can perfect a surface like no other tool, with a glossy smooth, light-reflecting sheen that brings out the inner beauty of the wood. But I've heard from many woodworkers who complain that their planes leave visible ridges in the surface, even after meticulous sharpening.

These defects, known as tracks, can be removed with sandpaper or scrapers, but a better option is to avoid creating them in the first place. You can try readjusting the blade laterally and taking lighter cuts. But often the best option is to add a slight arc to the cutting edge of the blade, called a crown or camber.

I add the camber while honing, applying different degrees of pressure to achieve a uniform arc across the cutting edge (see p. 30). This slight camber is suitable for all smoothing planes that are intended to give the final polish to a wood surface, including board edges, ends, and faces. A cambered blade also excels for tasks like cleaning up dovetails and flushing door frames after glue-up.

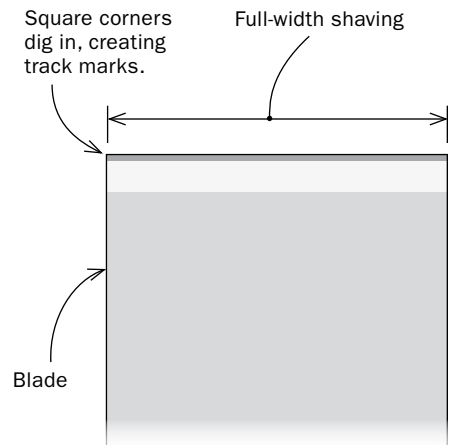
When a cambered smoothing plane is sharpened and set up correctly, it leaves a surface so smooth and so flawless that a finish often can be applied right after planing. The one exception would be a high-gloss tabletop where the reflective quality of the surface is extremely revealing and will show any undulations left by the plane, however slight. In cases like this, it is advisable to scrape and sand the surface after planing.

Chris Gochnour never has a dull blade in his shop.

Warning sign. You can tell your blade needs cambering if it is taking a full-width shaving, with an even thickness. The track marks will be noticeable (inset).



Not hip to be square. A blade sharpened with a square profile will dig in at the corners, creating ridges in the handplaned surface, called tracks.



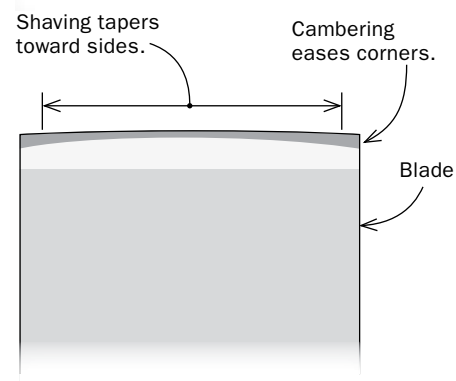
The solution: cambering



Rock and roll. A single-roller honing guide with a narrow wheel makes it easy to rock the blade to exert pressure where needed for cambering.



Perfect curve. The degree of camber for a smoothing plane is slight—between 0.001 in. and 0.002 in.—but it's very visible on the bevel.

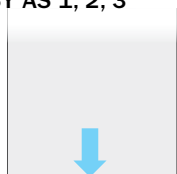


Sharpen and shape at the same time

To add camber, concentrate pressure on different areas of the blade while honing. This technique removes less material in the center and more toward the edges (see sequence below). Start with a coarse grit and work through the finer abrasives.

Once the blade is sharp, test it in the plane. If the shaving is narrow, you have too much camber. Go back to the stones and put more emphasis on the center of the blade. If you still get tracks, place more emphasis on the corners of the blade.

EASY AS 1, 2, 3



Pressure in center for one pass



Two passes each just outside center



Three passes on each corner

Perfect surface.

An ideal camber will produce a thin, nearly full-width shaving that tapers to nothing at its edges (far right). It also will leave a glass-smooth, light-reflecting sheen on the surface of the board.

