

Caleb James

Raised Panel Plane Use & Care Instructions:

This plane is designed to produce the raised panel profile and tongue for use in typical furniture sized door construction. The profile height is $\sim 5/16"$ and $\sim 1-1/4"$ wide including the tongue.

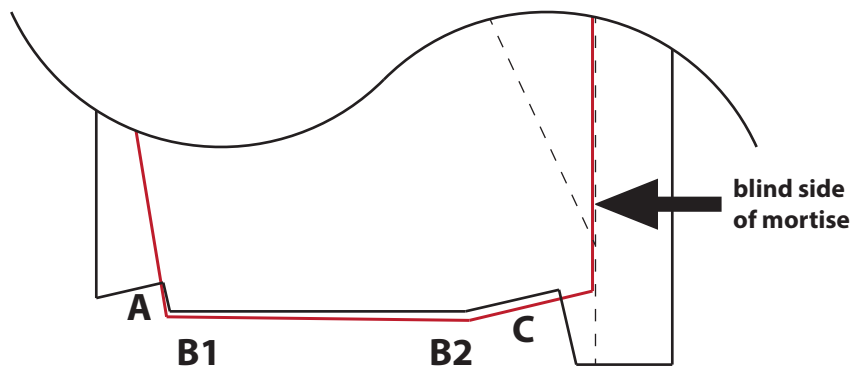
The plane will produce a beveled profile that is $\sim 13^\circ$. Therefore, the "spring" angle that the plane is held at to produce the profile is $\sim 13^\circ$. It is recommended that a jack plane be used to remove the majority of material then followed by the panel raising plane to complete the profile. Make all cross grain cuts first before moving on to the long grain cuts.

As with all side escapement planes, the best performance is achieved when the plane is well tuned and sharpened with the correct profile shape. This is especially true of planes with a wide profile. In order for your shavings to eject properly out the side of the plane it is critical that you have a specific profile to the blade in relation to the sole of the plane.

The blade profile *should not* match the sole exactly. You want your blade profile to have slightly less reveal from the sole at the escapement side of the plane. That means you want to take a lighter shaving nearer the escapement and a heavier shaving nearer the wedge mortise. A thinner shaving at the escapement side will cause the shavings to turn "out" of the escapement rather than "in", which would cause the shavings to jam.

The illustration below shows the suggested blade profile angles for best performance. The blade profile is noted in red. To cut a clean fillet in cross grain work the blade tip at "A" should extend out just enough to sever the fiber ($\sim .010$) and then trail back into the profile. Note that the blade profile is not parallel with the fillet. If it angles back out it will cut a "jagged" fillet.

The blade profile from "B1" to "B2" should gradually extend more from the sole. As mentioned, this aids in ejecting the shavings "out" rather than just "up" or "in" which will cause them to jam. The tongue portion at "C" should extend the same distance as at the deepest point of "B2". The profile is parallel to the sole at this location.



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Your planes performance will greatly improve if you keep the sole waxed. I prefer a soft paste wax that is carnauba based. This will significantly decrease resistance on the sole and be more enjoyable to use. Despite this you should expect the sole to exhibit some "scorching" marks from friction - typically near the mouth but other areas as well. This is normal.

Suggested steps to seasonally tune your plane:

- 1) Confirm that the blade is bedding properly and the wedge is fitting correctly.
- 2) Place the iron in the plane with it retracted from the sole and wedged.
- 3) Secure the plane in a vise so that any clamping pressure does not distort the body.
The rear end of the plane secured in a tail vise works well. Tune the sole so that all surfaces are straight and true. Keeping each profile element/shape equal in width from toe to heel will aid in keeping your profile coplanar (not twisted).
- 4) Now sharpen the blade accordingly in relation to the profile elements. Using machinist layout fluid on the blade and scribing/transferring the profile shape to the blade makes a good guide to work to.
- 5) Wax the sole.