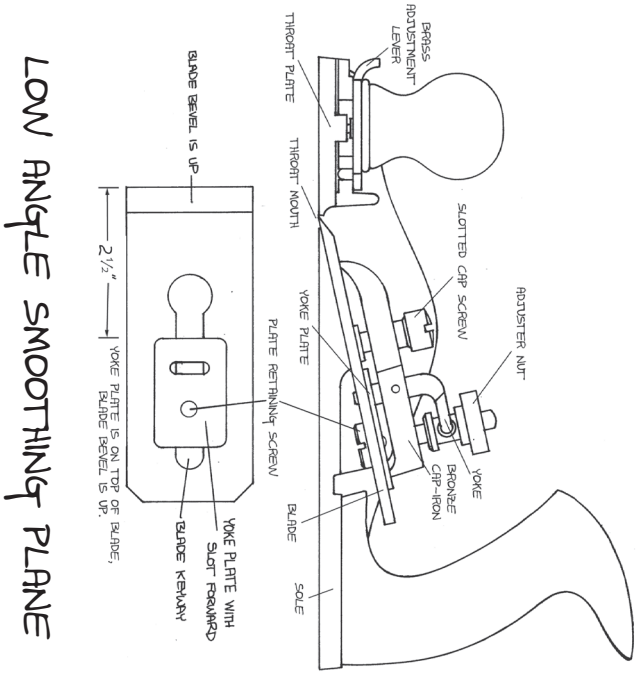


**WARNING**: This product can expose you to lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to **www.P65Warnings.ca.gov**. Wash hands after handling.


Lie-Nielsen TOOLWORKS® INC.

*Heirloom Quality Tools®*


# Low Angle Smoothing Plane


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*Made in Maine, USA, since 1981*


## Low Angle Smoothing Plane

Stanley produced three large-format low angle block planes. One of these, the Low Angle Smoothing Plane, was only made from 1926 to 1943*, which may account for the extraordinarily high prices that it commands on the antique market. Our Low Angle Smoother is based on the Stanley — it is essentially a shorter version of the Low Angle Jack. It has an adjustable mouth, and a unique overhead Bailey adjuster for depth of cut. This plane is useful in a wide variety of jobs from rough work to smoothing, and can be easily converted from one type of work to another. The best finishes will be obtained with a very sharp blade set to take a fine cut, and the mouth opening no larger than necessary to pass the chip. When you want to cut more aggressively, open the mouth more and advance the blade for a deeper cut. For best results on end grain, set the blade and mouth fine.

**Geometry**: The blade is bedded in the tool at 12° with a 25° bevel, making the included cutting angle 37°.

**Blade Sharpening:** The blade comes ready to use, but honing a secondary bevel of 5° will increase performance, help achieve a razor edge quickly, and improve edge life in hardwoods. For information on sharpening, we recommend David Charlesworth's video, *Plane Sharpening*, available via our website in both DVD and streaming formats.

**Blade Adjustment:** The blade is easily adjusted with the adjuster nut over the cap iron. This unique arrangement provides silky smooth adjustment. Turn the screw clockwise to advance and counter clockwise to retract the blade. You do not need to loosen the cap screw to do this. Make sure the mouth is adequately open before advancing the blade to avoid damaging your edge. When adjusting the blade, it is a good idea always to finish on a forward adjustment. This takes up backlash in the adjuster mechanism and will help prevent the blade from slipping in use.

**Mouth Adjustment:** Hold the tool in one hand and loosen the front knob about ¼ turn. Adjust with the brass lever. Tighten the knob again firmly, **but do not over tighten**.

**Setting the Yoke Plate:** The overhead yoke engages the slotted plate screwed to the blade. The front of this plate needs to be 2 ½" from the cutting edge, with the slot toward the bevel. Tighten the plate retaining screw firmly.

**To Remove the Cap:** Loosen the 9/16" slotted cap screw several turns. Lift the cap by the adjusting nut and slip the cap over the cap screw through the large hole. Reverse the process to replace, making sure the gear tooth yoke end fits into the slot in the blade adjustment plate. The tapered shoulder of the cap screw fits into the countersink in the cap. You should tighten this screw firmly.

**Handling the Tool:** You will probably find that, with a full grip around the handle, your little finger will not have much room. The No. 164 is very short for a handled tool (this is the reason for the overhead adjuster), and to get a maximum of usable blade, some finger room is sacrificed. This will improve as the blade shortens with sharpening. Meanwhile, grip high or with three fingers — the little finger pointing forward or the index finger curled around the adjuster screw.

**Materials:** The body is cast from Ductile Iron, a very strong alloy that will take a lot of abuse. These castings are fully stress-relieved, a process that removes inherent stresses and ensures that the tool will remain flat and true. The cap is Manganese Bronze. Other parts are Brass and Steel. The blade is 3/16" thick A2 Tool Steel hardened to Rockwell 60-62, cryogenically treated and double tempered. Our heat treating technique ensures that the blade will take and hold a very fine edge for a long time. After heat treating, the blade is fully surface ground on the top, back, and cutting edge, giving a smooth, flat surface that will take a mirror finish very quickly. The thick blade provides solid chatter-free cutting.

**Maintenance:** The sole is ground flat to .0015" or less. Occasional hand lapping with fine wet/dry sandpaper (320 grit or higher) on a flat surface like a glass plate will help remove dings and keep it true. The cap iron can be polished with any good brass polish, or allowed to patina with age and use. Occasionally, the tool should be disassembled, cleaned and moving parts oiled. The blade should be kept lightly oiled to prevent rust, especially when the tool is not in use.

**Guarantee:** Materials and workmanship are guaranteed for the life of your tool. Call for repairs or replacement parts. We are available for advice if you ever have a problem using your tool.




*Rev. 01182019*


*Alvin Sellins, *The Stanley Plane,* The Early American Industries Association, 1975.