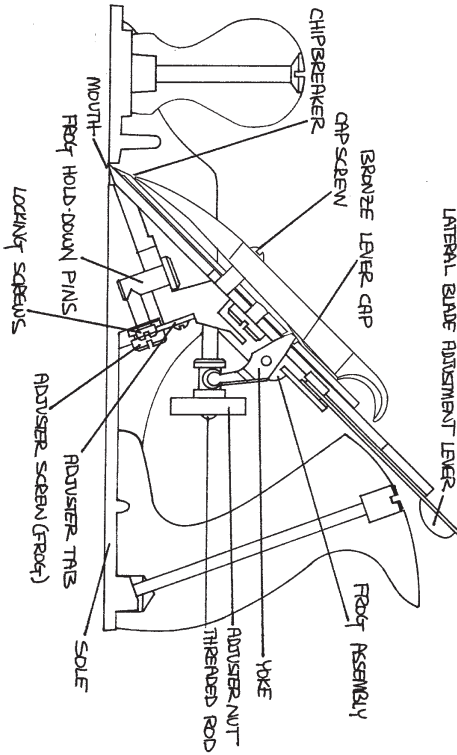


BENCH PLANES



Lie-Nielsen TOOLWORKS[®] INC.

Heirloom Quality Tools[®]


Bench Planes

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Made in Maine, USA, since 1981

 **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.

Bench Planes

Our Standard Bench Planes (except for the No. 1) are based on the Stanley Bedrock design, last produced in 1943. In their golden years, Bedrocks were top of the line with a fully machined fit between frog and body, and adjustable from the rear without removing the blade and cap. This allows you to easily change the mouth setting from a coarse to fine cut. Lie-Nielsen Bench Planes include these features as well as a Bronze cam lever cap, lateral adjustment, and spinwheel blade adjuster.

Geometry: Bench Plane blades are ground with a 25° bevel and bedded at 45° with the bevel down. Optional High Angle Frogs convert the blade angle from 45° to 50° (York Pitch) and 55° (Middle Pitch) to make smoothing difficult woods easier.

Blade Sharpening: The blade comes ready to use, but honing a secondary bevel of 5° to 10° 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: To advance the blade, turn the adjuster nut clockwise. It is always a good idea to finish adjusting the blade by a forward adjustment to take up backlash and to prevent the blade from moving. In order to be able to adjust the blade easily, **do not overtighten the cap screw.**

Mouth Adjustment: To adjust the mouth opening, loosen the two locking screws at the back of the frog; then turn the middle adjuster screw. Observe the opening in front of the blade. When it is correct, set the locking screws again.

Lie-Nielsen Chipbreaker: Our Chipbreaker is 1/8" thick. The raised lip under the bevel of the chipbreaker is back beveled 1° to ensure the leading edge contacts the blade firmly. You should never need to dress this surface, but if you do, use a very fine stone and be sure to maintain the angle. The 25° bevel may be honed occasionally. For general work, set the end of the chipbreaker about 1/16" from the cutting edge of the blade; for the finest smoothing work, set it closer to the edge.

Materials: Iron bodies are cast from Ductile Iron, a very strong alloy that will take a lot of abuse. We use Manganese Bronze for the Bronze bodies. These castings are fully stress relieved, a process that removes inherent stresses and ensures that the tool will remain flat and true. The blade is A2 cryogenically treated Tool Steel, hardened to Rockwell 60-62 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. The cap is Manganese Bronze.

The No. 3 through No.7 Lie-Nielsen Bench Planes come with a new and improved Stainless Steel yoke installed in the frog. The Steel is stronger than Bronze and is more resistant to wear over time.

Maintenance: All Bench Plane bodies are surface ground flat and square to a tolerance of .0015". Depending on how much use your tool gets, an occasional light sanding with 320 grit or finer wet/dry paper on a flat surface will keep the sole in as-new condition. Tools with Iron bodies should be kept lightly oiled or waxed to prevent rust. We recommend Jojoba Oil, a plant based oil product that is non-toxic, odor-free and easy to use. Also, in our shop, we use a fine abrasive handblock to remove any light surface oxide from tool bodies and blades. Oil and abrasive handblocks are available from us.

A light oiling on the threaded rod, the Brass adjuster nut and the lateral blade adjustment lever will keep them moving freely. Many people like the patina that Bronze gets with age, but if you wish to keep the finish bright, a little brass polish is in order. The Cherry handle and knob are oiled and buffed with wax to produce a natural finish. Wipe with oil as desired to refresh.

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.