

Rabbet Planes Are Real Shop Workhorses

*These versatile tools clean up machine cuts
and fine-tune joinery for a perfect fit*



by Garrett Hack

If I were headed to another part of the world for an extended stay and could pack only a small kit of woodworking tools, I would make sure I brought along at least one rabbet plane. From cutting and fitting rabbets and dados to making final adjustments to tenons, rabbet planes have no equal.

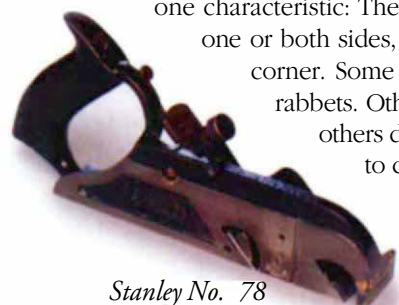
There are dozens of types of rabbet planes, but they all share one characteristic: The iron is flush with the plane body on one or both sides, allowing the plane to cut right into a corner. Some rabbet planes cut timber-frame sized rabbets. Others are better suited to fine work. Still others do very specialized jobs, like cutting into corners or widening grooves cut with a router or dado set.

In 1872, the Greenfield Tool Co. offered nearly 100 sizes and types of wooden rabbet planes and an

additional 38 models of fillisters (a fancier model that included a fence, a nicker to score cross-grain cuts and a depth stop). Cast iron later became the material of choice, and it wasn't long before there were even more choices in iron than there had been in wood. Many of the older rabbet planes are no longer in production, but a number of them are still being made (available through mail-order companies such as Garrett Wade, Lee Valley Tools and Woodcraft). The reason is simple: Rabbet planes have not outlived their usefulness, even in woodshops where much of the work is done by machine. Just two rabbet planes make a good starter kit (see the story on the facing page).

Two basic planes for all-around work

For general-purpose work, I turn to a basic rabbet plane—either a Stanley No. 78 (see the photo at left) or a No. 289. They can quickly adjust a rabbet that's been cut on the tablesaw or sink a rabbet



Stanley No. 78

Adding rabbet planes to your tool kit

What do you include in a kit of rabbet planes that will handle any job in a furnituremaking shop? Though no single rabbet plane can do everything, the No. 78 comes close—it can cut and adjust many different rabbets.

For fitting joints precisely and paring end-grain shoulders, however, the No. 78 is too coarse a tool. For these jobs a low-angle, fine-mouth, heavy shoulder plane is ideal. Any of the larger Stanleys work well—the No. 92, No. 93 or No. 94—and they can double as chisel planes.

I would also include a No. 90. If you do a lot of fine, precise work, a bullnose rabbet can really come in handy. —G.H.

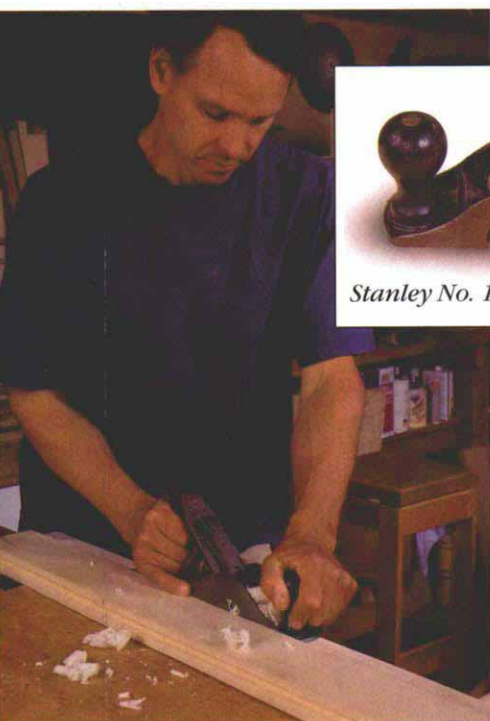


in the back of picture-frame stock. Because these planes are so simple to keep tuned and to use, it's often possible to cut a rabbet in less time than it takes to set up a router.

These planes were designed more for carpentry than furniture-making, so their mouths aren't as narrow as I'd like for fitting joints. This makes them better suited for less-than-fussy work. Stanley's No. 78 and the Record No. 778 (essentially the same tool) are the only basic rabbet planes I'm aware of that are still being made. Both are generally available. Because so many wooden rabbet planes of the same style were made, they are easy to find on the used-tool market.

Bench rabbet planes do large-scale work

Three Stanley planes, Nos. 10, 10¼ and 10½, were designed for planing large rabbets. All three are known as bench rabbet planes because they look identical to the No. 4 and No. 5 bench planes, except for the distinctive rabbet throat. Capable of the same heavy work as a bench plane, bench rabbet planes have double irons (an iron with a chipbreaker screwed to it), lateral and depth adjusters and the same style handles and knobs as their standard bench plane counterparts.



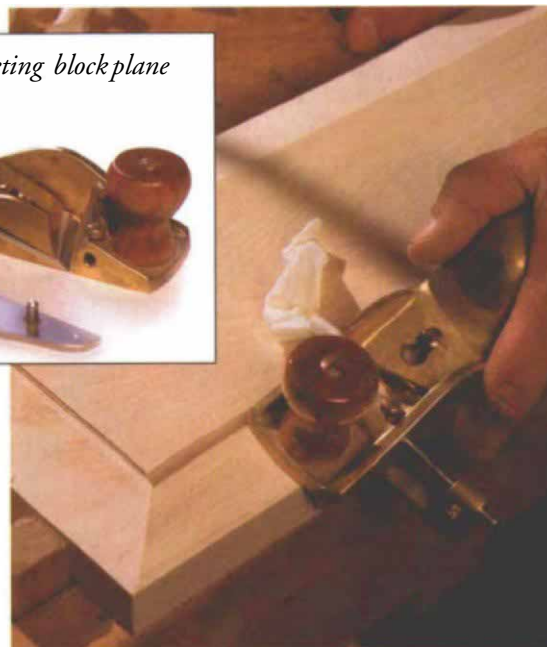
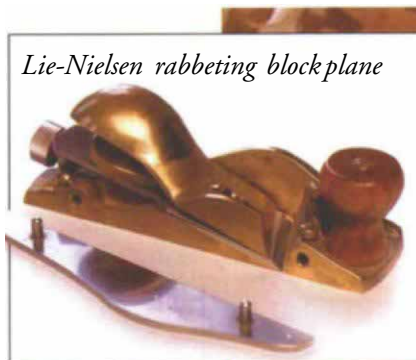
The Stanley No. 10, a favorite with timber framers, is still in production. With its long sole, the same as a 13-in. No. 5 jack plane, and its 2½-in.-wide iron, the No. 10 is a useful plane for cleaning up timber frame tenons or big rabbets in door and window frames (see the photo at left). The

No. 10¼ is rare. It's the same length as the No. 10, but it has a tilting handle and knob and nickers. The No. 10½ bench rabbet plane is still being made (see the photo above). It's about 9 in. long and has a 2½-in.-wide iron, the same as a No. 4 smooth plane.

Rabbeting block planes are suited to small work

For work in tight places, the smaller rabbeting block planes are handiest. The Stanley No. 140 looks like any other block plane, except that the iron is skewed and one side of the plane body is removable for rabbeting work. I've owned a Millers Falls No. 7 for years, which is a knockoff of the Stanley model (manufacturers copied many of the Stanley planes after the patents expired).

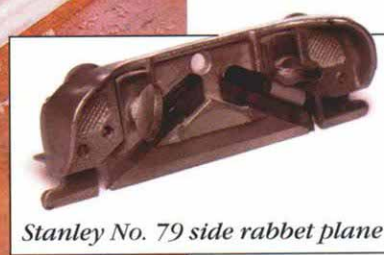
The No. 140 can be used to smooth the bevels of raised panels and to rabbet with one hand. The Sargent No. 507, which has its



iron exposed on both sides, is useful if you encounter tearout when planing in one direction. The only rabbeting block plane I know of that is still being made today is the Lie-Nielsen skew block plane, which is based on the Stanley No. 140. The plane has a skewed iron that's designed to give a smoother slicing cut.

Side rabbet plane adjusts width of groove

Side rabbet planes are unusual because the iron projects from the side of the plane and takes shavings off walls of rabbets and dados. Stanley's right- and left-handed pair, the Nos. 98 and 99, are now out of production, though Lie-Nielsen reproductions are now being made (see the photos above). Stanley also came up with the No. 79, a tool with two irons—one for each direction—that's still being made (see the photos below). These planes are great for fitting or tapering the shoulder of a groove or a sliding



Tuning a rabbet plane

The key to tuning any rabbet plane is aligning the iron both with the sole and with the side (or sides) of the plane. The object is to have the cutting edge parallel with the sole and parallel with, and just barely peeking out, on the side. This is one of those things that's easier said than done, and it usually takes some experimenting.

Once the iron is aligned with the side, check that it's parallel with the sole. The only way to remedy any large misalignment is by grinding and rehonning the edge. With the iron properly ground and honed, careful honing in the future should keep

everything in alignment.

Skewed irons require one additional tune-up step: The back of the iron along the shoulder side has to be ground back so it's flush with the side of the plane.

The outside of the nicker or spur should be aligned with the cutting edge and should be honed knife sharp. Hone it only on the inside edge, and if necessary, bend it slightly (as though you were setting a sawtooth) to bring it into alignment with the iron.

Finally, a light coating of wax on the parts will make adjustments smoother.—G.H.

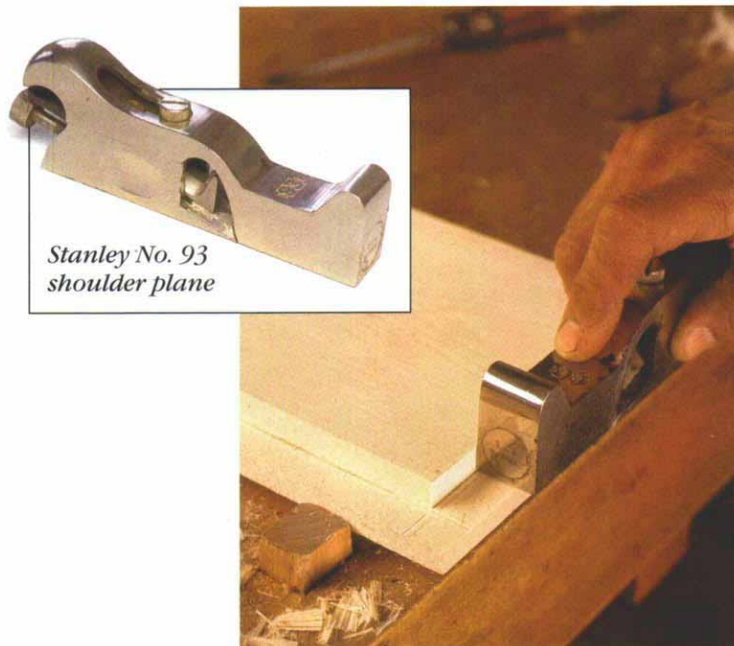
dovetail. If you need to take off just $\frac{1}{32}$ in. to get a shelf to fit in a dado perfectly, using one of these planes is just as fast and a lot safer than tapping on the router fence and taking another pass.

Shoulder planes are precision rabbet planes

The sole and sides of a shoulder plane are machined or lapped precisely square so that the plane can be used on its side to trim the shoulder accurately while being guided by a tenon or the bottom of a rabbet (see the photos below). Stanley made four versions, each progressively longer and wider: Nos. 90, 92, 93 and 94. Only the No. 94 is no longer being made (a No. 91 was never produced).

One situation where a larger Stanley shoulder plane really makes sense is for cutting a long rabbet, like the one on the end of a tabletop that will receive breadboard ends.

All four of these planes have threaded adjusters for setting the



Stanley No. 93 shoulder plane



From rabbet plane to chisel plane—All four of the Stanley shoulder planes can be converted to chisel planes by removing the nose pieces, allowing the plane to cut right into a corner.

depth of the iron. The No. 90 has a bullnose for working into tight places, and the nose pieces on all four can be removed to turn them into chisel planes (see the photo above).

The Stanley designs are based on the classic British shoulder rabbets, either made from steel plates dovetailed together or cast from gunmetal. In both, a wood infill was sandwiched between the two sides of the plane body, and a wedge kept the irons in place. □

Garrett Hack builds furniture in Thetford Center, Vt. He is the author of The Handplane Book (The Taunton Press, 1997),