

## Buying a Used Hand Plane

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Buying a used hand plane (or an inexpensive new plane) is an inexpensive way to expand one's complement of planes. It also seems like a good strategy for getting started with hand planes without spending hundreds of dollars to buy an elite new plane.

This strategy may be ironic, because it is helpful to know how a plane should perform in your hands when you are evaluating a new (to you) plane. Good technique and a good plane (sharp, properly set up, etc.) are *both* necessary for successful hand planing.

It is very challenging to learn how to plane without a properly sharpened and set up plane. I struggled to fettle an old Stanley #4 *and* to learn how to use it at the same time. I had trouble distinguishing whether my problems were caused by my lack of technique or the shortcomings of the plane. I wished that I could learn with a brand new Veritas or Lie-Nielsen, but I would not spend the money for one until I knew that hand planes would become essential tools in my shop.

Now planes have become essential tools for me. As I have gained experience and skill, I have found that most of my problems were from my lack of skill. I now see that some opinions on the internet about used or inexpensive planes are misleading. Some planes are collector's items. Collectors emphasize possession and appearance over use. This usually inflates prices well above a plane's practical value. Some people are tool snobs (for want of a better term) more interested in trivialities than in actually using a plane to accomplish work. The craftsmen who made furniture before the machine age did not worry about trivialities. A hand plane might cost them a week's wages or more. They learned to use the tools they could afford.

I have experience with vintage planes, inexpensive new planes, and expensive new planes. All but two work well. Neither is a bench plane. (a scraper plane and a dovetail plane). I have no hesitation to recommend used or new planes, if the plane is sound. Some inexpensive new planes are useful out of the box or after a bit of light fettling. Many useful planes are put on Ebay because of their owner's lack of technique. Some others have given years of service and are nowhere near the end of their useful lives.

An older plane is likely to be stable. David Savage, a professional woodworker and teacher, says that some new planes have "green" castings so that their soles can go out of flat as they cure. Some older planes, of course, have been mistreated, e.g., damaged or left to rust; or have parts missing.

The quality of a plane does matter to someone who can take advantage of it. Expensive planes may be worth their price, but not to me at one stage in my learning and maybe not to you at the moment. Think of what else you could buy for the \$100-\$300 price difference between a good new or used plane and an elite one. Your technique determines your level of craftsmanship, not the quality (and certainly not the price) of your plane.

My best planes are new, from Veritas. (I believe that Lie-Nielsen and Clifton are also as good. I have just stayed with Veritas so far.) They come ready to use out of the box, with a bit of light honing. Most of them offer me a choice of alloys for the plane iron. Veritas even offers a choice of totes, knobs, etc. I do use my finest planes for my most demanding work. But my every-day "go-to" bench plane is an inexpensive #5 Record knockoff from Anant. With a new

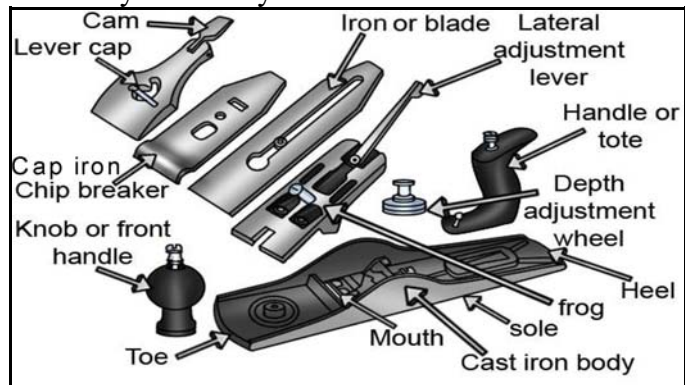
Hock iron it is fine for any job that requires a #5. My “go-to” block plane is an old low-angle Dunlop (Sears),

### ***What to Look For***

The most respected brand names in used planes are Millers Falls, Union, Sargent, Record, and Keen Kutter. Older Stanley planes are more esteemed than newer ones. Most people think of Ebay and flea markets as a source of used planes. You might also post a query on a reputable woodworking forum. The people who sell used tools on woodworking forums work hard to develop and to keep a reputation for quality. There are companies that specialize in vintage tools. They can be a useful source if you can find “users” among the high-priced collectables. Since you cannot do the assessment described below until the plane is in your hands, buy only from reputable dealers who guarantee satisfaction or your money back.

The general issue in buying a used plane is to make sure that all of its parts are present and proper. (Figure 1) Some parts are easily replaced, but some are unique to a certain model and are very difficult to find. Since different plane designs have different parts, it is well to research a particular plane, if possible, to learn what it is supposed to look like and what features it is supposed to have. The Superior Works (Patrick Leach) is the place to learn about Stanley planes.<sup>1</sup>

There is a website cataloging Millers Falls Planes.<sup>2</sup> And so forth.



**Figure 1.** Parts of a Bench Plane

### ***Casting & Sole***

The casting is the main body of the plane – the machined hunk of metal that holds everything together.

1. Reject a plane with cracks or repairs to the casting. Look under any paint, stickers, labels, and price tags. Chips, scratches, light pitting and custom screw-holes are cosmetic and don't affect the usability of the plane.
2. Examine the mouth (the slot in the sole where the iron protrudes). It must be clean of chips or other defects or repairs. If it has been enlarged by filing, reject the plane.
3. Put the plane on a flat surface. If the plane rocks on its sole, even a little, look elsewhere. Lay a straightedge along the sole. Most people will say that the sole must be dead flat. This is probably good advice, but somewhat excessive. If the area around the mouth is slightly recessed, for example, the plane may work just fine for evenly grained wood. (The recess might allow some tearout with unevenly grained wood.) If it is slightly convex, the plane probably will not work at all until the “bulge” is removed. You can flatten a sole that isn't perfectly flat. This is tedious, and removes metal from the casting. Removing much metal may also widen the mouth.
4. If you will use the plane with a fence to joint edges, or on its side with a shooting board, the

angle between the side of the casting and the sole should be 90° exactly. You may be able to correct for small errors in this angle.

### *Knob and Tote*

Your hands will spend a lot of time clutching the tote (rear handle) and knob. They should be solid and fit your hand comfortably. Again, cosmetic damage should not disqualify an otherwise acceptable plane, but cracks and obvious glued repairs should. Replacements are usually available, however. They would just add to the cost of the plane.

### *Frog*

The frog attaches to the casting and provides an angled seat for the iron. Some bench planes have adjustable frogs. This feature is desirable because it allows the mouth to be opened for coarse work or closed for fine work.

1. The frog must be intact, smooth and fully contact the iron when the plane is assembled. It should also make tight contact with the casting when the adjustment screws are tightened. It should not rock or move from side to side.
2. Make sure that the adjustment screws, if any, can be loosened and tightened.
3. The frog has a threaded hole in the center to receive the bolt that holds the lever cap, cap iron, and iron in place. The bolt should be present and should screw into the hole securely.
4. If the lever cap, cap iron and iron are off the plane, make sure that they fit together well, that the bolt is present, and that it is long enough to hold them in place securely.
5. If the plane has a lateral adjustment lever, make sure that it is present and that it can rotate from side to side.
6. Make sure that the depth adjustment mechanism rotates smoothly.

### *Iron, Cap Iron, and Lever Cap*

The plane iron (blade) contacts and cuts the wood.

1. The main issue is how much usable length remains. The depth adjustment mechanism has limits, so if too much of the plane iron has been removed in sharpening, or if the iron has been replaced with an aftermarket iron, the depth adjustment may not be able to travel far enough for the iron to contact the wood properly. This all depends on just how the lever cap, cap iron, and iron fit together with the depth adjustment.
2. If the iron is worn away, missing, or badly damaged (chipped, pitted) you should be able to buy a replacement from Hock, Lie-Nielsen, or Lee Valley Tools. They may be superior to the original iron anyway, but this will add to the cost of the plane.
3. The cap iron (aka chipbreaker) attaches to the top of the iron. It has to fit tightly against the iron down at the mouth or shavings and dust will accumulate between them and clog the plane.
4. The lever cap sits on top of the iron and cap iron assembly and holds them tightly against the frog. It uses a cam to tighten the assembly. Make sure that the cam is present and that it works correctly.

***Fettling the Plane***

You may need to fettle your new plane, that is, prepare it for use. A full discussion of fettling a plane is beyond the scope of this article. It may be a short process, or it might be long and tedious, especially if you need to flatten the sole. Before you do anything major, however, remove the plane iron from the casting and then remove every bit of rust from the sole, preferably with some steel wool. Apply a thin coat of paste wax (non-silicone like Johnson's) and buff it off with a clean rag.

Make sure that the plane iron is sharp – sharp as a new razor blade, sharp enough to shave hair off your arm with little or no pulling. Install it and retract it within the casting. Then advance it to where it is just barely visible when you sight along the sole. Try to cut some even-grained wood like poplar, with the grain. Advance the iron until it barely cuts, or retract it if it is digging into the wood. If it will take a thin shaving, you are on your way. If it is skipping or chattering, consider that the iron may not be quite as sharp as you thought it was. Otherwise, more detailed fettling like flattening the sole and adjusting the frog may be necessary.

1.<http://www.supertool.com/StanleyBG/stan0a.html>

2.<https://oldtoolheaven.com/bench/bench.htm>