

Infill Planes

The Planes of Choice For the Finest Cabinet Work

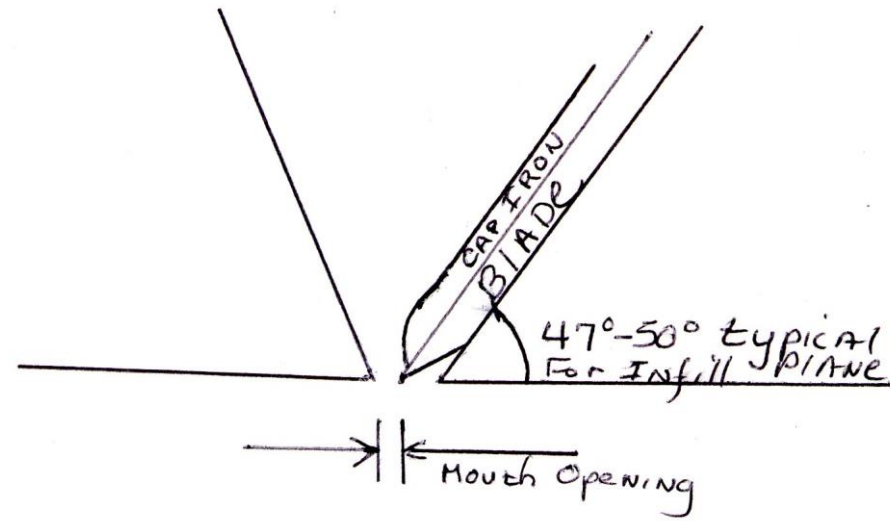
What Constitutes an Infill Plane?

- Infill Planes were made in quite a few patterns, but the common theme is that they are a wooden body encased with metal.
- That body may be of cast metal or fabricated from dovetailed plate stock

What is the Motivation for the Infill Plane

- Infill planes were specifically made for “High-Class Woodwork”
- This translates to needing planes that minimize tear-out on cabinet woods
- The opening of the mouth plus the distance from the blade edge to the cap iron is the leverage that the shaving has to tear out the surface. This must be minimized to minimize tear-out.
- Also, the bedding angle should be higher than for soft wood
- This can be achieved with a wooden plane, but the sole quickly wears and no longer provides the solid support that keeps the shaving from tearing out the surface

Plane Geometry



History of the Infill Plane

- Roman planes have been found that were presumably the first infill planes
- In the in the 17th and early 18th Century musical instrument makers started using infill mitre planes
- In the latter part of the 18th Century, mitre planes and rebate planes for cabinetmakers emerged. The Duncan Phyfe Chest contains a mitre plane and a rebate plane
- In the 19th Century, production grew and more forms emerged, but things only really took off in the second half of the 19th Century

The Typical Forms

- Smoothing planes are perhaps the most common form, both handled and unhandled
- Bullnose, shoulder, and rebate planes are nearly as common
- Panel planes, which are essentially large smoothing planes for smoothing larger surfaces, i.e. panels, are next
- Mitre planes are far less common
- Jointers and chariot planes are relatively uncommon
- Thumb planes are downright scarce

The Smoothing Plane

- Infill planes typically have a very tight mouth and are intended for very fine work. The smoothing plane is only used for the final smoothing or on very difficult grain



Bullnose Planes



Shoulder Plane



Rebate Planes

- Rebate planes and shoulder planes are functionally similar. The rebate planes have a somewhat higher angle to the blade and in general are not as wide, but they can be wide, and shoulder planes can be narrow



Panel Planes



Mitre Planes



Jointer Planes



Chariot Planes and Thumb Planes



Fake or Fraud

- Faking in the antique tool world is not common because it is too much work to create a plausible tool from scratch, but they do exist
- There is a whole series of chariot planes that were all faked in the 1970s and early 1980s and sold through one British dealer
- I once saw a dovetailed gunmetal Norris #6. Norris never made dovetailed gunmetal planes, so this should raise red flags
- Fraudulent planes are common because crooks are lazy and these are easy to create. Most are just fraudulently marked genuine planes. Some planes are unmarked maker made planes and some are craftsman made planes, which are generally much less valuable

Who were the makers?

- Slater, Spiers and Norris were the largest makers, followed by Holland, Miller, and Robert Towel, and a plethora of low production makers
- The British tool industry, to this day, shared products between companies
- For example, Mathieson was a huge wooden plane maker, but it is unclear that they ever made infill planes. Some of their earlier planes are clearly made by Spiers, and the later ones are made by Norris. There is also a very small set of Mathieson planes that are unique in style and may have been made in house
- All of the major dealers bought in planes that were marked for them

What to look for when buying

- Condition really trumps maker
- Plane came with fitted irons, and this fit is critical to performance
 - British dealers will stick in any blade that will go in the opening
- Over-cleaning is more than just aesthetic, some precision is usually lost
 - If the front edge of the sole is rounded from a buffing wheel or even hand sanding, the plane is ruined
 - This problem is commonly seen on planes that have been through the British tool trade

Who made the best planes

- Norris often gets this reputation, probably because of their superb adjustment mechanism, but other makers were just as good
- All of the makers that were in business over a long period had some variation in quality.
- The best planes of Spiers, Norris, Holland, Miller, and Robert Towel, are all superlative.
- Slater planes are generally a distinctly inferior product, but they will still perform well

Are dovetailed planes better

- Planes were either cast or dovetailed
- Dovetailed planes are generally more expensive than cast iron planes
- If you drop a cast iron plane it will break
- A dovetailed plane, whether wrought iron, steel, or gunmetal, will generally not easily crack
- Most gunmetal planes are actually cast, but dovetailed examples are highly sought after for their appearance
- Cast gunmetal planes usually have a soldered steel sole
- Dovetailed gunmetal planes will have a steel or wrought iron sole