

Lesson 4: Types Of Planes

Introduction

A hand plane is a tool for shaping wood using muscle power to force the cutting blade over the wood surface. Some rotary power planers are motorized power tools used for the same types of larger tasks but are unsuitable for fine-scale planning, where a miniature hand plane is used.



Generally, all planes are used to flatten, reduce the thickness of, and impart a smooth surface to a rough piece of lumber or timber. Planning is also used to produce horizontal, vertical, or inclined flat surfaces on workpieces usually too large for shaping, where the integrity of the whole requires the same smooth surface. Special types of planes are designed to cut joints or decorative moldings.

Hand planes are generally the combination of a cutting edge, such as a sharpened metal plate, attached to a firm body, that when moved over a wood surface, take up relatively uniform shavings, by nature of the body riding on the 'high spots in the wood, and also by providing a relatively constant angle to the cutting edge, render the planed surface very smooth.

Types of Planes

1. *BENCH PLANE*

A bench plane is an essential tool for woodworkers, carpenters, and craftsmen who need to shape, flatten, and smooth wood surfaces. It is designed with a sturdy handle for stability and control, and a sharp, angled blade that removes thin layers of wood with each pass.



This versatile tool can be used on a variety of woodworking projects, from creating fine furniture pieces to finishing carpentry work. By skillfully manipulating the bench plane, craftsmen can achieve precise and smooth surfaces, enhancing both the functionality and

aesthetic appeal of their creations. Whether in a professional workshop or a diy enthusiast's garage, a bench plane is a must-have tool for anyone working with wood.

2. **BLOCK PLANE**

A block plane is a small woodworking hand plane that is specifically designed for fine, precise work. It typically has a low-angle blade and a compact size, making it ideal for working on small surfaces and tight spaces. Block planes are commonly used for tasks such as smoothing surfaces, trimming edges, and creating intricate profiles. They are handheld tools that provide control and precision to achieve desired results in woodworking.



3. **SPECIALIZED PLANE**

Specialty hand planes play a crucial role in woodworking, offering specialized functionality for specific tasks and achieving desired finishes. These tools are designed to cut joints or decorative moldings, providing woodworkers with greater precision and control compared to general-purpose bench planes. By forcing the cutting blade over the wood surface, hand planes shape the wood, flatten rough lumber, and create smooth surfaces. Woodworking hand planes come in various types, each serving a specific purpose. Joinery planes and molding planes, for example, are used to cut grooves, rabbets, and dovetails, as well as to create decorative profiles and shape curves. These specialty hand planes are essential tools for achieving precise and professional woodworking results.



4. ROUTER PLANE

A router plane is a woodworking tool used for cutting, shaping, and smoothing surfaces. With historical background dating back centuries, the router plane has been used by craftsmen to create precise and intricate designs. Its primary purpose is to remove excess material or create channels in wood, allowing for precise mortise and tenon joints.

Unlike a power router, a router plane relies on manual operation, providing greater control and accuracy. Woodworkers utilize router planes to flatten surfaces, create grooves, and adjust the depth of a cut. Their compact size and versatility make them indispensable in woodworking projects.

Whether in a professional workshop or a diy setting, a router plane is a valuable tool beloved by woodworkers for its ability to achieve precision and enhance the overall quality of their craft.



5. SCRAPER PLANE

A scraper plane is a hand tool used in woodworking and sometimes in metalworking. It is designed to smooth surfaces, remove fine shavings, and eliminate small imperfections such as tear-out or uneven grain that can't be easily handled by regular planes or sandpaper.



6. *SHOULDER PLANES*

The shoulder plane (a specialized rabbet plane) is the ultimate tool for trimming a joint to a perfect fit. There is no better plane for trimming the shoulder of a tenon to perfection or for rebating work.



7. *PLOW PLANES*

A plow plane (or plough plane) is a traditional woodworking hand tool used to cut grooves (also called ploughs) into wood, usually along the grain. It's especially useful in joinery work for tasks like making:

- Grooves for drawer bottoms
- Tongue-and-groove joints
- Panel frames
- Bookshelves and cabinets



8. REBATE PLANE

The rebate plane (also known as the rabbet plane) is a hand plane designed for cutting rebates into wood. As with most hand planes, there are metal and wooden versions.



9. SPOKESHAVES

A spokeshave is a hand tool used in woodworking for shaping and smoothing curved surfaces. It has a small blade set between two handles, and it works similarly to a plane, but it's designed for more detailed, curved work.



PROPER USE OF PLANES

1. Choose the appropriate hand plane for your job.
2. Sharpen the blade of the plane.
3. Adjust the angle of the blade.
4. Plane the surface of the wood.
5. Avoid tear-out by cutting along the grain of the wood.
6. Check the accuracy of your planing.

NOTE: Why should you sharpen plane blades?

- Sharpening plane blades can also help prolong the life of your blades. Dull blades tend to wear out faster as they are being forced to work harder to achieve the same results. By regularly sharpening your plane blades, you can prevent excessive wear and tear, leading to a longer lifespan for your blades. Lasty, sharp blade can avoid accidents.

Terminologies

Woodgrain – the longitudinal arrangement of wood fibers or the pattern resulting from such an arrangement.

Wear and tear - the loss, injury, or stress to which something is subjected by or during use.

References

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