PLANE FACTS

How to Select
How to Use
How to Care For
How to Sharpen
"Plane Facts" has been prepared to help hobbyists and woodworkers obtain a maximum of utility and pleasure from these fine planes.

For the amateur, this will serve as an instruction manual and guide for the proper use of his plane.

For the experienced woodworker, this booklet will serve as a handy reference.

It is hoped that a study of these pages will result in increased satisfaction in the use of these quality tools.
SMOOTH PLANES

The Double Plane Iron (shown at left) consists of the plane iron itself (also called the blade) and the plane iron cap. The plane iron cap breaks and curls the shaving. Together with the toe of the plane, it prevents the wood from splitting ahead of the cutting edge thus producing a smooth surface. The plane iron cap also serves to stiffen the plane iron.

HOW TO ADJUST IT...

To put the plane iron and the plane iron cap together: lay the plane iron cap on the flat side of the plane iron and at right angles to it with the screw in the slot; draw the plane iron cap back; turn it straight with the plane iron; advance the plane iron until the edge is just back of the cutting edge of the plane iron (the plane iron cap should be set 1/8" back of the cutting edge for most work, closer for cross or curly grained wood). The plane iron cap must not be dragged across the cutting edge. Hold the plane iron and the plane iron cap firmly and tighten the screw to hold the two parts together.

TO PUT THE PLANE TOGETHER

To put the plane together lay the plane iron, bevel side down, on the frog. (As shown in the diagram, the frog is the sloping part of the plane which supports the plane iron and is located directly behind the mouth. It is adjustable to widen or narrow the mouth.) Be sure the roller on the lateral adjusting lever, the end of the "Y" adjusting lever and the head of the plane iron cap screw are correctly seated.

Slip the lever cap over the lever cap screw and press down the cap. If the plane iron is in the correct position the cam will easily snap into place. If the cam will not snap in place easily, slightly loosen the lever cap screw. If the plane iron is not firmly held when the cam is in place, slightly tighten the lever cap screw.

ADJUSTING TO CUT IS QUICK, EASY, ACCURATE

To adjust for the thickness of the shaving, sight along the bottom of the plane and turn the adjusting nut until the cutting edge projects about the thickness of a hair.

The plane iron is pushed out when the adjusting nut moves out toward the handle. The plane iron is drawn in when the adjusting nut moves in toward the frog.

To adjust for the evenness of the shaving, sight along the bottom of the plane and move the lateral adjusting lever toward the right or the left as required.

To adjust for width of the mouth, first remove the lever and the plane iron. This will expose the two frog screws which should be slightly loosened. The frog adjusting screw, located below the brass adjusting nut, may be turned to widen or close the mouth opening. Generally, the opening should be wide for coarse grained wood or for taking a thick shaving; for close grained wood or when taking a fine shaving, the mouth opening should be narrowed. When the desired width is obtained, tighten the two frog screws and reassemble the plane.
A rabbet is a rectangular recess cut out of the full length of the edge of a piece of wood, and a rabbet plane is especially designed to make this type of cut. There are several designs available such as the conventional rabbet plane pictured here, bench rabbet, bullnose rabbet, side rabbet, and various weather-stripping planes.

**Duplex Rabbet**

This plane has two seats for the cutter: one for regular work, and the other for bullnose work. It is fitted with a spur and a removable depth gauge. The adjustable fence can be used on either side of the plane. By removing the fence and arm, the plane can be used for several purposes and in many positions.

**Side Rabbet Plane**

For planing along the side of a rabbet cut or groove. Used in trimming dados, mouldings and grooves of all kinds. Equipped with reversible nose-piece for working in corners. A depth gauge is furnished. Sides and bottom are ground to insure accuracy. Nickel plated.

**Trim Edges with This...**

For trimming or squaring the edge of boards up to \( \frac{3}{4} \)" for a square or close fit. The cutter works on a skew. Wood blocks of various bevels may be attached enabling the user to make slanting cuts.

**For Rough, Heavy Work...**

The roughing or scrub plane is used to remove quite a bit of wood from the edge or surface of a board. Its heavy, narrow, rounded cutter makes it possible quickly and easily to bring the board down to rough dimensions.

**For Curved Surfaces...**

The circular plane is made with a flexible steel bottom which can be adjusted to plane concave and convex surfaces. It is adjustable down to a minimum radius of 20 inches. The cutter is adjustable endwise and sidewise. The fence is fastened at each end to a plane body and adjusted by a screw at the center.

**For Fine Cabinet Work**

These cabinet makers’ rabbet planes are made with the sides and bottoms machine ground square to one another so plane will lie flat on either side. They can be worked either right or left hand. The throat opening is adjustable for coarse or fine work and the cutters are adjustable for thickness of shaving. With front removed they can be used as chisel planes. No. 90 is of the bullnose pattern and can be used in corners or other hard-to-get-at places.
INSPECT THE WOOD TO BE PLANED

It is important to determine the direction of the grain of any piece of wood which is to be planed. Planing against the grain roughs the wood, while planing with the grain leaves the wood with a smooth surface.

If you have a choice of the piece of wood to be used, it is preferable to avoid planing a side containing knots. If knots are unavoidable, frequently a block plane will do a better job on them. Old or used pieces of wood should be examined to discover possible nails or other material which would damage the cutter.

HOLD THE BOARD SECURELY...

A good vise or the use of a bench stop is required to hold the board securely with the grain running in the direction in which you will be planing.

KEEP CUTTER SHARP...

Your plane is no better than its cutter. For this reason frequent inspection of the cutting edge should be made. A blade which is sharp will not reflect light, while a dull blade will appear shiny. When not in use always rest the plane on its side to protect the cutting edge.

KEEP CUTTER SQUARE...

Each time the cutter is ground or honed, the edge should be checked with a try square to assure that the edge is square with the side of the cutter.

ADJUSTMENT OF CUTTER

The cutting edge should be adjusted to take a thin shaving, not thicker on one edge than on the other. If the blade is set too far out, it will gouge the work or clog the throat of the plane with the thick shavings.

HOW TO SHARPEN PLANE IRONS

Your plane should never be used if the cutter is the least bit dull. One of the best ways to determine whether or not your plane iron is ready for sharpening is to examine the edge closely under a light. If the cutting edge reflects light, then it needs to be sharpened.

GRINDING...

Grinding your plane iron should be done only when a new bevel is necessary or when the edge of the cutter is nicked. Grinding straightens the edge and restores the bevel preparatory to sharpening by whetting on an oilstone. To obtain the proper grinding angle of about 25°, make the bevel a little longer than twice the thickness of the plane iron. The grindstone should turn toward the plane iron. The plane iron should not be allowed to overheat, to prevent softening the steel. Move the plane iron from side to side to grind all parts of the bevel and to keep the wheel true. The edge should be straight and at right angles to the sides of the plane iron.

WHETTING...

Honing or whetting your plane iron is done much oftener than grinding it, for it is whetting which produces the really sharp cutting edge. An important fact about plane cutters is that there are two different angles of the blade. One is the grinding angle (25°–30°), the other, the whetting angle (30°–35°). It is only the whetting angle that you will ordinarily attack with an oilstone. In whetting, place the bevel down on the stone with the back edge of the bevel slightly raised. Move the plane back and forth being sure the hands move parallel to the stone so the angle between the plane iron and the stone will stay the same throughout the stroke. Remove the wire edge by taking a few strokes with the flat side of the plane iron held absolutely flat on the stone.
STANLEY BENCH PLANES

No. 4 SMOOTH PLANE

Favorite of woodworkers everywhere. 2 in. wide hardened steel cutter is adjustable both laterally and for coarse or fine shavings. Throat is adjustable for coarse or fine work. This plane is made of the finest gray iron castings; has rosewood handle and knob. Plane is 9 inches long.

No. 5 JACK PLANE

Here is the most useful all-around plane you can own. Perfect balance for easy handling. Will smooth rough boards quickly and accurately. 2 in. hardened steel cutter is adjustable for coarse or fine shavings. Throat is adjustable for coarse or fine work. Plane body is made of the finest gray iron casting, ground straight and true. Comfortable handle and knob are genuine rosewood. Plane is 14 inches long.

No. 6 FORE PLANE

An 18 inch plane with 2¾" cutter width, this plane is one of the finest obtainable. Its size eliminates any chattering of the cutter and the length of the bottom makes it possible to obtain long and straight edges. The cast plane body is machined true and smooth. Individually tested cutters are made of special analysis steel to retain cutting edges longer. Fully adjustable for evenness and thickness of shavings. Genuine rosewood handles and knobs are shaped for comfortable grip.

STANLEY BLOCK PLANES

No. 9½ BLOCK PLANE

A small plane with big plane features. Has all cutter adjustments. Throat is adjustable for coarse or fine work. Cutter is 1¾" wide, set at an angle of 20°. Handy for end grain and small pieces of wood. Plane is 6" long.

No. 9½ BLOCK PLANE

A fine plane for small work. The cutter is fully adjustable. The 1¾" cutter is set at an angle of 20°. Made of finest gray iron castings. The plane is 6" long. Similar to No. 9½ but without adjustable throat.

No. 118 BLOCK PLANE

All steel plane. Only 3 removable parts: cap, cutter and bottom; complete with adjustments locked in place. Eliminates lost parts. Low angle cutter rests on seat at 12° angle. 6" long. Cutter 1¾" wide.

No. 18¾ BLOCK PLANE

Steel knuckle-joint lever. Top snaps into position and holds the cutter firmly, easy to adjust for thickness and evenness of shavings. Nickel plated trimmings. 6" long. Cutter 1¾" wide.

No. 60½ BLOCK PLANE


No. 65 BLOCK PLANE

Knuckle-joint lever cap snaps into position and holds cutter firmly. Cutter is adjustable. Throat is adjustable for coarse or fine work. Cutter is set at 12° angle. Nickel plated lever cap and trim. 7¾" long. Cutter 1¾" wide.
### Repair Parts for Stanley Bench Planes

<table>
<thead>
<tr>
<th>No.</th>
<th>Name of Part</th>
<th>No. of Plane</th>
<th>2C</th>
<th>3C</th>
<th>4C</th>
<th>4½C</th>
<th>5C</th>
<th>5½C</th>
<th>6C</th>
<th>7C</th>
<th>8C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cutter</td>
<td>1</td>
<td>$1.20</td>
<td>$1.30</td>
<td>$1.30</td>
<td>$1.70</td>
<td>$1.30</td>
<td>$1.70</td>
<td>$1.70</td>
<td>$1.70</td>
<td>$1.80</td>
</tr>
<tr>
<td>2</td>
<td>Plane Iron Cap</td>
<td>4</td>
<td>.40</td>
<td>.40</td>
<td>.40</td>
<td>.50</td>
<td>.40</td>
<td>.50</td>
<td>.50</td>
<td>.50</td>
<td>.50</td>
</tr>
<tr>
<td>3</td>
<td>Cap Screw</td>
<td>10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
</tr>
<tr>
<td>4</td>
<td>Lever</td>
<td>11</td>
<td>.85</td>
<td>.90</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>5</td>
<td>Lever Screw</td>
<td>10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
</tr>
<tr>
<td>6</td>
<td>Frog Complete</td>
<td>1.10</td>
<td>1.10</td>
<td>1.10</td>
<td>1.20</td>
<td>1.10</td>
<td>1.10</td>
<td>1.20</td>
<td>1.20</td>
<td>1.20</td>
<td>1.30</td>
</tr>
<tr>
<td>7</td>
<td>“V” Adjusting Lever</td>
<td>10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
</tr>
<tr>
<td>8</td>
<td>Adjusting Nut</td>
<td>20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
</tr>
<tr>
<td>8½</td>
<td>Cutter Adjusting Screw</td>
<td>20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
</tr>
<tr>
<td>9</td>
<td>Lateral Adjusting Lever</td>
<td>20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
</tr>
<tr>
<td>10</td>
<td>Frog Screw</td>
<td>10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
</tr>
<tr>
<td>11</td>
<td>Rosewood Plane Handle</td>
<td>1.10</td>
<td>1.10</td>
<td>1.10</td>
<td>1.10</td>
<td>1.10</td>
<td>1.10</td>
<td>1.10</td>
<td>1.10</td>
<td>1.10</td>
<td>1.10</td>
</tr>
<tr>
<td>12</td>
<td>Aluminum Plane Handles, No. 3X Fits Planes 3, 4, 5½, No. 5X Fits Planes 4½, 5, 6, 7, 8...</td>
<td>1.50</td>
<td>1.50</td>
<td>1.50</td>
<td>1.60</td>
<td>1.60</td>
<td>1.60</td>
<td>1.60</td>
<td>1.60</td>
<td>1.60</td>
<td>1.60</td>
</tr>
</tbody>
</table>

*Locking screw and nut one assembly on No. 118 Plane.*

In ordering be sure to specify number and name of Part and Number of Plane, thus: No. 4 Lever for No. 5 Plane. It will also help us if you will include with your order a rough sketch or tracing of the part desired.

---

### Repair Parts for Stanley Block Planes

<table>
<thead>
<tr>
<th>No.</th>
<th>Name of Part</th>
<th>No. of Plane</th>
<th>9½</th>
<th>9½</th>
<th>15</th>
<th>18½</th>
<th>60½</th>
<th>65</th>
<th>65½</th>
<th>118</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cutter</td>
<td>9½</td>
<td>.60</td>
<td>.60</td>
<td>.60</td>
<td>.60</td>
<td>.60</td>
<td>.60</td>
<td>.60</td>
<td>.60</td>
</tr>
<tr>
<td>4</td>
<td>Lever</td>
<td>15</td>
<td>.50</td>
<td>1.10</td>
<td>1.10</td>
<td>.50</td>
<td>1.10</td>
<td>.50</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Lever Screw</td>
<td>18½</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
</tr>
<tr>
<td>6</td>
<td>Adjusting Slide or Frog</td>
<td>60½</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
</tr>
<tr>
<td>7</td>
<td>Adjusting Lever</td>
<td>65</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
</tr>
<tr>
<td>8</td>
<td>Adjusting Nut</td>
<td>65½</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
</tr>
<tr>
<td>8½</td>
<td>Adjusting Nut Screw</td>
<td>118</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
</tr>
<tr>
<td>16</td>
<td>Lateral Adjusting Lever</td>
<td>2.30</td>
<td>2.30</td>
<td>2.30</td>
<td>2.30</td>
<td>2.30</td>
<td>2.30</td>
<td>2.30</td>
<td>2.50</td>
<td></td>
</tr>
</tbody>
</table>

*Adjusting screw and nut one assembly on No. 118 Plane.*

In ordering be sure to specify number and name of Part and Number of Plane, thus: No. 4 Lever for No. 9½ Plane. It will help us if you will include with your order a tracing or rough sketch of the part desired.

---

**Stanley Tools**

New Britain, Connecticut

Printed in U.S.A.

Form No. T-193

Converted to PDF by Stan Faullin