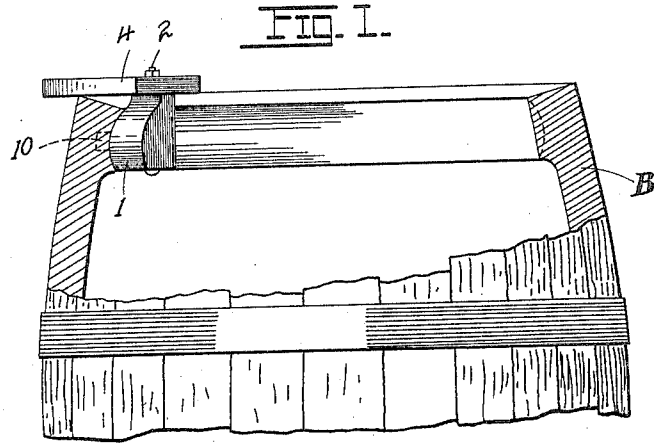
No. 821,543. PATENTED MAY 22, 1906.

H. SCHNEIDER.

COOPER'S PLANE.

APPLICATION FILED AUG. 31, 1905.

FIG. 1.



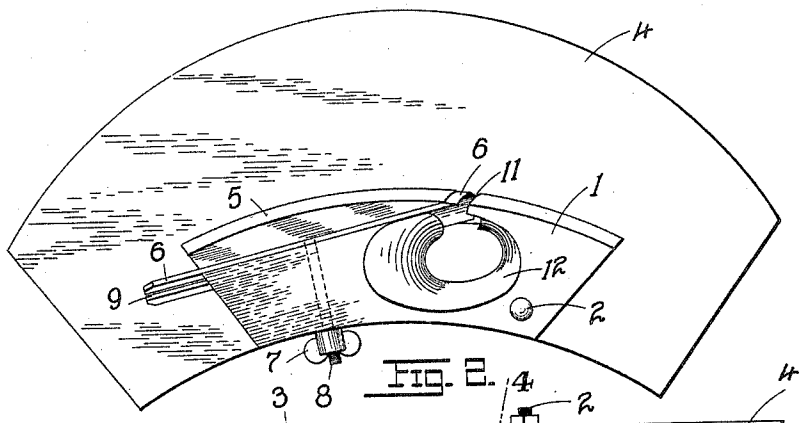


FIG. 2.

FIG. 3.

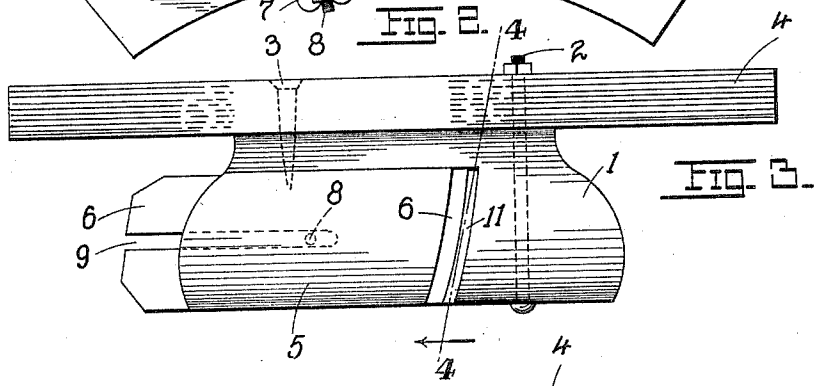
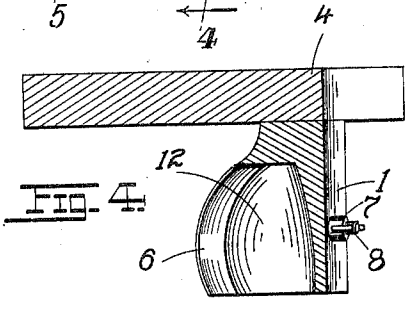


FIG. 4.



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COOPER'S PLANE.

No. 821,543. Specification of Letters Patent. Patented May 22, 1906.

Application filed August 31, 1905. Serial No. 276,659.

To all whom it may concern:

Be it known that I, HERMANN SCHNEIDER, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Coopers' Planes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in coopers' planes; and it consists in the novel construction of plane more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a vertical sectional elevation of a cask, showing my invention applied thereto. Fig. 2 is a bottom plan of the plane. Fig. 3 is a front elevation thereof; and Fig. 4 is a section on the inclined line 4 4 of Fig. 3, taken just outside the edge of the blade.

The present invention relates to that class of planes which are used for finishing and smoothing the terminal inner surfaces of casks, barrels, and the like preparatory to the formation of the groove which receives the head.

The object of the invention is to construct a plane which shall shave or cut with a minimum degree of resistance, one in which the blade is readily adjustable, one in which the aperture for the discharge of the shavings is positioned to allow the shavings to drop directly and vertically into the bottom of the cask or barrel, and one possessing further and other advantages better apparent from a detailed description of the invention, which is as follows:

Referring to the drawings, 1 represents a stock-piece, secured by means of a bolt 2 and screw 3 (or in any other equivalent mechanical manner) to a supporting-plate 4 of convenient contour and of sufficient dimensions to overlap the edge of the cask, Fig. 1. The stock is provided with a clamping-plate 5, between which and the adjacent wall of the stock may be secured a suitable blade 6, the adjustment of the blade being effected by moving it to proper position and then securing the parts rigidly by the clamping-nut 7, passed over the outer screw-threaded end of the bolt 8, projecting from the inner face of the plate 5, and passing loosely through the body of the stock 1 between its upper and lower faces or walls. The bolt passes freely through the rear elongated slot or recess 9 of the blade, the slot being of sufficient length to permit all necessary adjustments. The outer face of the stock jointly with the outer face of the plate 5 form a continuous outwardly-convex surface conforming to the curvature of the finished surface to be imparted to the cask preparatory to the formation of the groove 10, (shown dotted in Fig. 1,) the continuity of said surface being broken only by the throat or mouth 11, the width of which is determined or controlled by the position of the blade, which, by the way, is curved transversely to conform substantially to the convex surface referred to. The mouth 11 leads to the discharge aperture or cavity 12, which passes entirely through the stock and opens out through what constitutes the bottom of the stock, so that the shavings cut by the blade and passing through the mouth into the cavity 12 may drop or gravitate directly to the bottom of the cask. As seen from the drawings, the cavity-walls flare more or less downwardly, so that the shavings may in no wise be obstructed in their passage out of the stock.

In the operation of the plane the cooper sets the plate 4 upon the edge of the cask or barrel B, with the edge of the blade 6 against the surface to be planed, and then passes the plane around the barrel until the operation is complete.

It will be observed, Fig. 2, that the blade is set at a very acute angle to the outer surface of the clamp 5, enabling the cutting edge thereof to shave with least wear and tear on the metal, and hence a plane of the character here described seldom requires repairing or the blade sharpening.

Having described my invention, what I claim is—

1. A barrel-plane comprising a suitable stock having an outer convex surface, a detachable clamp or clamping-plate having an outer convexity forming a continuation of said surface, the continuity of said surface being interrupted by a suitable mouth, a blade secured in position by said clamp with its cutting edge projecting across the mouth, and an opening formed in the stock discharging through the bottom wall, substantially as set forth.

2. A barrel-plane comprising a suitable stock having an outer convex surface, a detachable clamping-plate having an outer convexity forming a continuation of said surface, but separated therefrom by a suitable

mouth, a discharge-opening leading from said mouth discharging through said bottom wall, a screw-bolt carried by the clamping-plate and passing loosely through the stock between the top and bottom walls thereof, a clamping-nut at the outer end of the bolt, a transversely-curved adjustable blade having an elongated recess for the free passage of the bolt, interposed between the clamping-plate and the stock, and a supporting-plate for the stock adapted to rest and travel over the edge of the barrel during the planing operation, the parts operating substantially as, and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

HERMANN SCHNEIDER.

Witnesses:

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