No. 866,549. PATENTED SEPT. 17, 1907.

J. W. WINNINGHAM.

PLANER HEAD.

APPLICATION FILED OCT. 1, 1906.

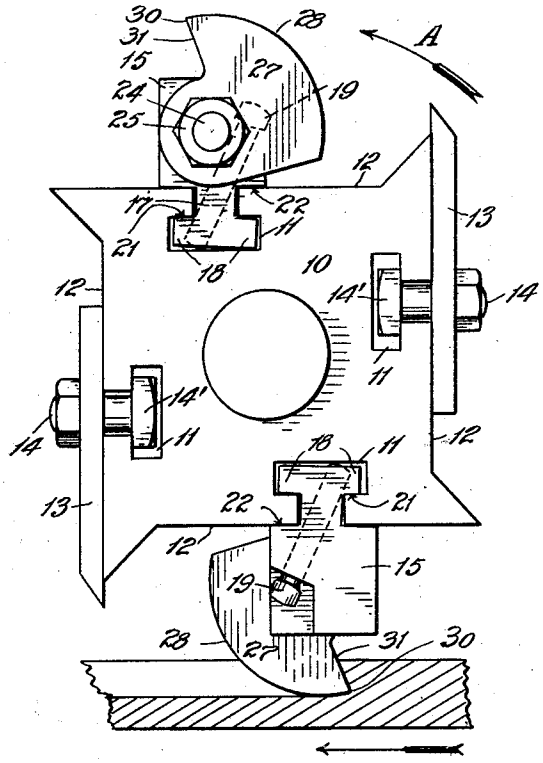


FIG. 1.

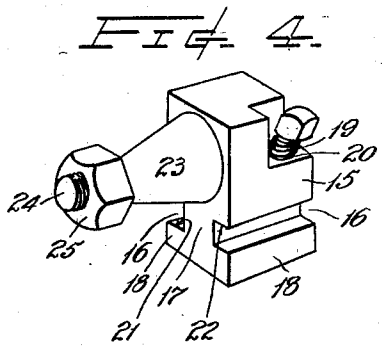


FIG. 4.

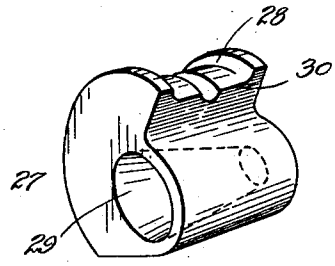


FIG. 5.

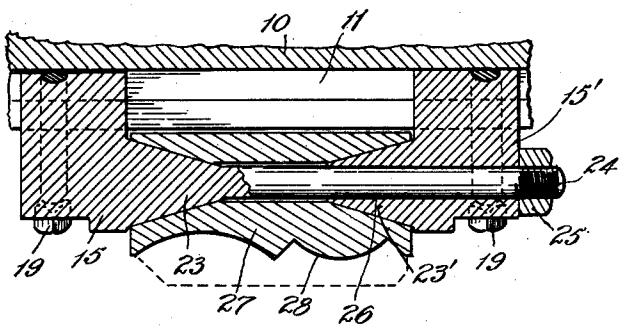


FIG. 3.

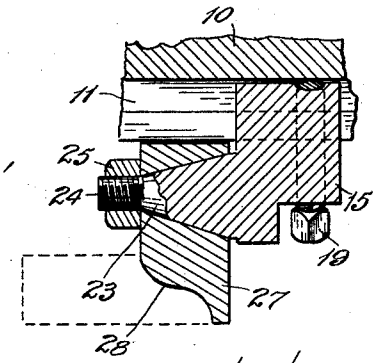


FIG. 2.

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PLANER-HEAD.

No. 866,549. Specification of Letters Patent. Patented Sept. 17, 1907.

Application filed October 1, 1906. Serial No. 336,912.

To all whom it may concern:

Be it known that I, JOHN W. WINNINGHAM, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Planer-Heads, of which the following is a specification.

This invention relates to wood planing tools and, more particularly, to that class employed with cutter-heads in stickers, planing machines, molding machines and the like.

The object of the present invention is the provision of a tool of circular or sector shape which may be quickly ground and set; and also of a holder for the tool which is adapted to reliably hold the same in adjusted rotary and transverse positions and that, too, with the cutter heads now in common use.

The invention consists in the novel construction, adaptation and combination of parts as will be hereinafter described and claimed.

In the accompanying drawings, of an embodiment of my invention, Figure 1 is an end elevation of a cutter head of ordinary type with my invention shown attached; Fig. 2, a fragmentary cross sectional view of the same; Fig. 3, a like view to illustrate the manner of supporting a long cutter through the employment of two holders one of which is slightly modified to suit the demand; and Figs. 4 and 5, respectively, perspective views of a holder and one form of cutter.

In these drawings, the reference numeral 10 designates a cutter head of the usual type which is rotatably mounted in the machine frame and is provided with a T-shaped slot 11 in each of its perimetrical faces 12, or in at least two of them.

13 represents the cutter knives of the ordinary type used for making flat surfaces and are severally secured in place by bolts 14 having heads 14′ which engage the cutter within the T-slots.

According to my invention I provide a cutter-holder formed of a block 15 having in its opposite side faces and adjacent of its bottom, longitudinal slots 16 to furnish a neck 17 therebetween and laterally extending flanges 18 below adapted to fit loosely and interchangeably in any of the aforesaid T-slots. The block is secured to the cutter head by a set screw 19 extending through a threaded aperture 20 at the rear end of the block and inclined from a longitudinal vertical plane extended through the block or radially of the cutter head. This fastening bolt has its point impinge against the bottom and to one side of a T-slot whereby the block is tilted opposite to the direction of revolution, indicated by arrow A in Fig. 1, and causes the slot-faces 21 and 22 to bear against the opposing faces of the cutter head and give a firm support to the tool. Projecting forwardly of the block is a tapering post 23 which, in the preferred form, terminates in a screw threaded stud 24 for the reception of a securing nut 25; while in the modified construction, see Fig. 3, there is no terminal stud provided and the post 23′ and block portion 15′ are bored as at 26 to allow of a prolonged stud 24′ of another holder being coupled therewith when two holders are required to carry a cutter. The cutters 27 employed in this invention are of segmental contour and have their respective circumferential portions 28 thereof turned out, or otherwise made, with a circular channel or flutings corresponding with the cross section of the molding or cut which they are intended to form in the work, examples of which are illustrated in Figs. 2, 3 and 5. Axially of the contours 28 of each cutter is a conical shaped bore 29, or two of them in the type shown in Fig. 3, to register with the respective of said posts and in order that the bearing will be entirely upon the posts these holes are made of slightly less diameters than the posts and by which arrangement the cutters can be reliably held in any circular adjustment when setting them about to present the cutting edges 30 in operative position, that is, in radial planes extending through the axes of the cutter head and the respective cutters.

It is obvious that the cutters can be sharpened by dressing off the advance faces 31 and not by grinding within the molded faces as is common with ordinary cutter knives and which is a decided advantage inasmuch as the shape of such faces in the present invention are not impaired either by wear or by regrinding.

Having described my invention, what I claim, is—

1. In combination with a cutter-head provided with T-shaped slots, of a cutter holder having a longitudinal groove in each of its opposite sides and a conical post terminating in a screw threaded end, a nut for said end, and a set screw arranged to tilt the holder and cause the upper wall of one groove and the lower wall of the other groove to respectively bear against the opposing surfaces of the cutter head.

2. The combination with a cutter-head provided with a T-slot, of a cutter holder comprised of a block provided with a T-shaped lower portion adapted to fit loosely within said slot, a conical shaped post protruding from the block and terminating in a screw threaded outer end, a nut for said end, a set screw extending diagonally through the block and adapted to impinge against the bottom of said slot, and a segmental shaped cutter with a conical aperture to provide a seating surface to bear against the post.

3. The combination with a cutter-head provided with T-slots in its outer surface, cutter holders severally provided with a T-shaped lower portion adapted to be loosely fitted in any of said slots and having a tapering post, and means to secure the holders in a tilted position to the head, of cutters provided with conical shaped apertures adapted

to be adjustably and interchangeably seated upon the respective posts, and means to secure the cutters to the posts.

4. In combination with a cutter-head provided with T-slots in its outer surface, cutter holders severally provided with a T shaped lower portion adapted to be loosely fitted in any of said slots and having a tapering post, and means to secure the holders to the head, of cutters provided with conical shaped apertures adapted to be adjustably and interchangeably seated upon the respective posts, and means to secure the cutters to the posts.

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

JOHN W. WINNINGHAM.

Witnesses:
PIERRE BARNES,
F. B. COSPER.