No. 675,184. Patented May 28, 1901.

J. ARMSTRONG.

TOOL HOLDER.

(Application filed Jan. 20, 1900.)

(No Model.)

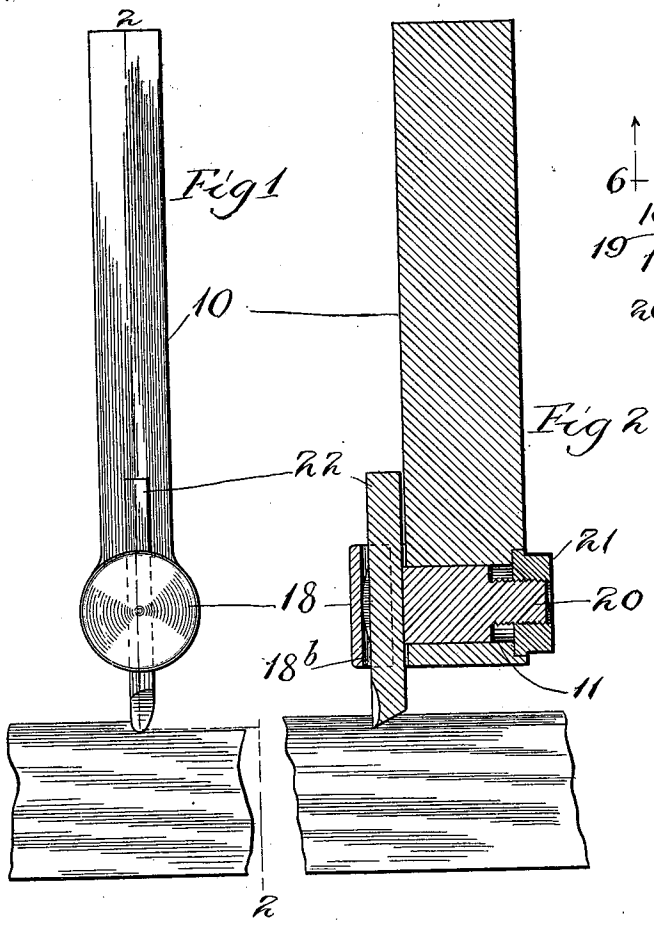


Fig 1

Fig 2

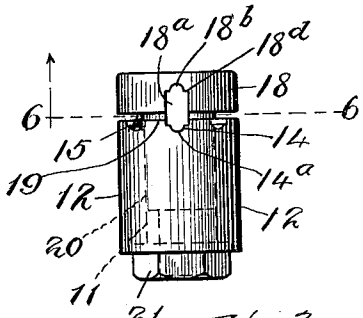


Fig 3

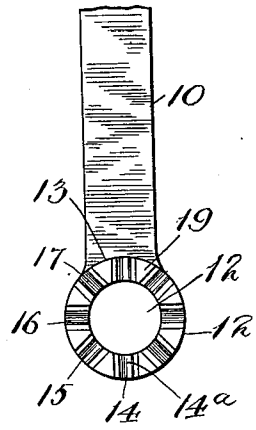


Fig 4

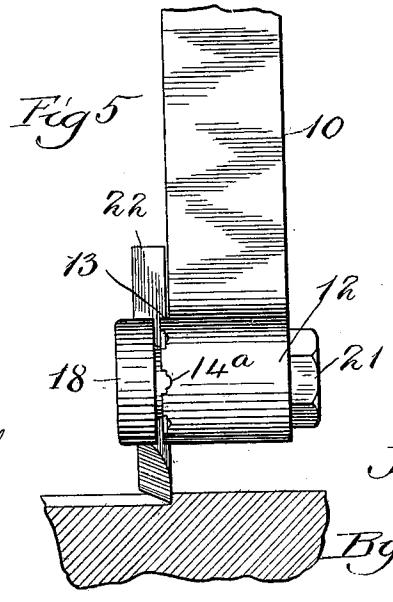


Fig 5

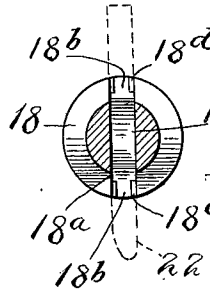


Fig 6

Witnesses
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TOOL-HOLDER.

SPECIFICATION forming part of Letters Patent No. 675,184, dated May 28, 1901.

Application filed January 20, 1900. Serial No. 2,221. (No model.)

To all whom it may concern:

Be it known that I, JAMES ARMSTRONG, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Tool-Holders, of which the following is a specification and which are illustrated in the accompanying drawings, forming a part thereof.

This invention relates to holders for planer-tools; and its objects are to provide a suitable holder for a small cutter of hardened steel and to provide for the adjustment of such a cutter within the holder to different positions and for securing it in the position to which adjusted.

The invention consists in the structure hereinafter fully described and which is illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of the tool in service. Fig. 2 is a central longitudinal section of the same on the line 2 2 of Fig. 1. Fig. 3 is a bottom plan view of the tool with the cutter-bar removed. Fig. 4 is a front elevation of the stock with the cutting-bar and binding-post removed. Fig. 5 is a side elevation of the tool, showing the cutter-blade in a position reverse from that shown in Figs. 1 and 2; and Fig. 6 is a section on the line 6 6 of Fig. 3.

The more common practice heretofore in vogue has been to use upon planers forged tools and which are necessarily reforged from time to time as they become dull. In connection with other ironworking machinery it is becoming a common practice to use what are known as "self-hardening" steel cutter-bars secured within a suitable stock, which may be properly held by the tool-post.

The implement forming the subject of this application provides for a similar use of the small cutting-bar of self-hardening steel in connection with planer-tools, so that as the cutter becomes dulled it may be readily removed and reground upon an emery-wheel, thus obviating the necessity for reforging. An additional advantage is found in the fact that by securing the cutting-bar in different positions with reference to the stock the tool is adapted for various kinds of work performed upon a planer, while the stock is adapted to receive cutter-bars without regard to the conformation of the cutting-point of the same, so that it is practicable to provide a large number of cutters of various shapes to be used with a single stock, thus saving the expense of preparing a large number of complete tools or frequently reshaping the few which may be provided.

In the drawings there is shown at 10 a stock, being in the form of a bar substantially the shape of the shank of the forged cutting-tools heretofore employed with planers, but having at one end a transverse aperture 11, within which there is fitted a binding-post 18, having at its inner end a reduced and screw-threaded shank 20 for the engagement of a nut 21, which reacts against the rearward face of the stock.

In order to secure the necessary strength, the end of the bar 10 may be enlarged to hub form, as shown at 12, and the front face 19 of this hub projects slightly above the front face of the stock 10, as shown at 13, and is diametrically channeled, as shown at 14, 15, 16, and 17, these channels forming a plurality of seats for the cutter-bar 22, so that its angular position may be adjusted and fixed to suit the exigencies of the work in hand. The bottoms of the channels 14 to 17 are longitudinally grooved, as shown at 14^a, for the purpose of forming a pair of shoulders against which the cutter-bar is seated.

The binding-post 18 is provided with a transverse aperture 18^a, adapted to loosely receive the cutter-bar 22, so that as the nut 21 is turned up the cutter-bar is securely clamped within one of the channels across the face 19 of the hub 12. In order to provide a wider bearing for the binding-post upon the cutter-bar to bring the bearing-faces thereof opposite the bearing-surfaces for the cutter-bar upon the stock and to still further compenpate for possible irregularities in the cutter-bar, the binding-post is provided with an enlarged head, as shown, and the outer wall of its aperture is recessed intermediate of its ends, as shown at 18^c, so that bearings are provided for the cutter-bar only at each end of the aperture, as shown at 18^d 18^e. The aperture 18^a is located in part within the head of the binding-post and in part within its stem, so that

when the nut 21 is turned up the cutter-bar will be securely clamped before the inner face of the head comes in contact with the surface 19 of the stock. That face of the aperture 18ª which forms the seat for the cutter-bar may also be longitudinally grooved, as shown at 18ᵇ, thereby forming shoulders against which the bar is seated. The rearward face of the hub 12 may be counterbored slightly to receive the nut 21, so that the latter will project but slightly beyond the rearward face of the stock 10.

By grooving the seats of the cutter-bar, as shown at 14ª and 18ᵇ, so that the bar may rest upon ledges or shoulders instead of upon a perfectly even surface, any irregularities in the faces of the bar which might prevent a firm grip upon it are the better taken care of, and by turning up the nut 21 the bar is firmly held against the slightest movement.

The cutting-blade may have its cutting edge directly forwardly from the front face of the stock 10, as shown in Figs. 1 and 2, or it may be returned to the reverse position, so that the cutter will follow the stock, as shown in Fig. 5, a position in which such a tool operates more smoothly in some classes of work.

I claim as my invention—

1. In a holder for planer-tools, in combination, a stock having a transverse aperture at one end and a plurality of channels in one face of the stock and diametrically crossing such aperture each forming a seat for a cutter-bar; a binding-post adapted to fit within such aperture and having its inner end threaded, and being provided with a transverse aperture for receiving a cutter-bar; and a nut adapted to engage the threaded end of the post, and drawing the cutter-bar into the channel to which it may be adjusted.

2. In a holder for planer-tools, in combination, a stock having a transverse hub at one end, such hub extending beyond the front face of the stock and being longitudinally apertured, the face of the prolonged end of the hub having a plurality of diametrical channels each forming a seat for a cutter-bar; a binding-post adapted to fit within the aperture of the hub and having an enlarged head for coöperating with the channeled end thereof, and being provided with a transverse aperture located in part within the head and in part within the stem of the post; and a draw-nut for engaging the inner end of the post.

3. In a holder for planer-tools, in combination, a stock having a transverse aperture at one end and a plurality of channels in one face of the stock and diametrically crossing such aperture, each forming a seat for a cutter-bar, the bottoms of such channels being longitudinally grooved; a binding-post adapted to fit within such aperture and having its inner end threaded, and being provided with a transverse aperture for receiving a cutter-bar, the outer wall of such aperture being longitudinally grooved; and a nut adapted to engage the threaded end of the post.

JAMES ARMSTRONG.

Witnesses:
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LOUIS K. GILLSON.