No. 648,075. Patented Apr. 24, 1900.

D. B. HYDE.

TOOL HOLDER.

(Application filed Feb. 27, 1899.)

(No Model.)

Fig. 1.

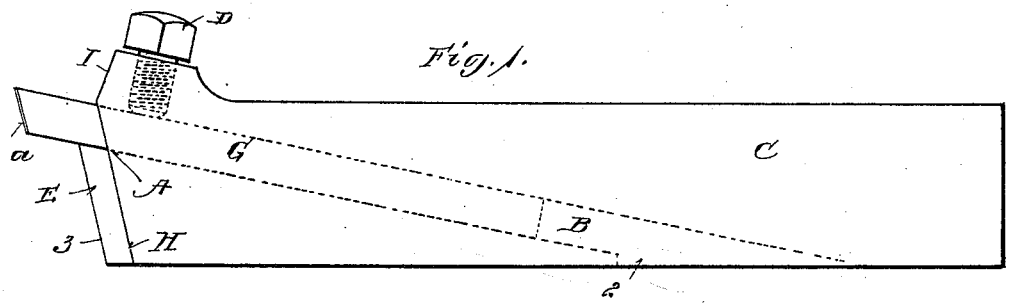


Fig. 2.

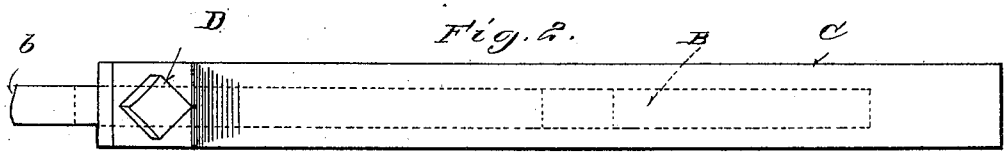


Fig. 3.

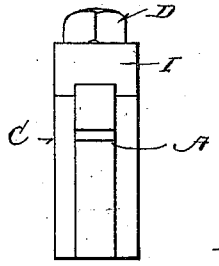


Fig. 4.

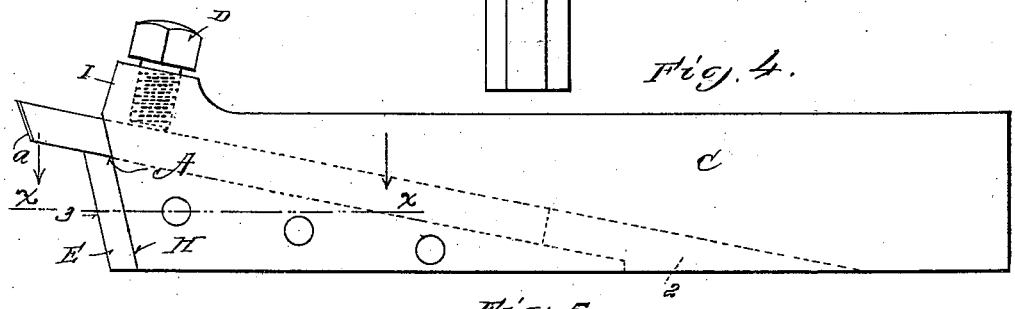
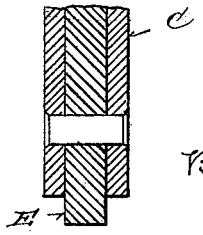


Fig. 5.



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UNITED STATES PATENT OFFICE.

DAVID B. HYDE, OF SPRINGFIELD, OHIO, ASSIGNOR TO THE WESTERN MANUFACTURING COMPANY, OF SAME PLACE.

TOOL-HOLDER.

SPECIFICATION forming part of Letters Patent No. 648,075, dated April 24, 1900.

Application filed February 27, 1899. Serial No. 706,966. (No model.)

To all whom it may concern:

Be it known that I, DAVID B. HYDE, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Tool-Holders, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in tool-holders for lathes, particularly adapted for shaping metal.

The object of my invention is to provide means for holding and supporting a cutting-tool in such a manner that the tool may be held rigidly in the holder even after it becomes very short, due to constant regrinding; and to that end my invention has reference to a support formed integral with the tool-holder or otherwise secured thereto and projecting beyond the same sufficiently to form an extended bearing for the cutting-tool to be held much more rigidly in a fixed position.

My invention also relates to details of construction hereinafter appearing, and particularly pointed out in the claims.

In the accompanying drawings, on which like reference letters and figures indicate corresponding parts, Figure 1 is a side elevation of my improved tool-holder, showing the cutting-tool secured therein. Fig. 2 is a plan view of what is shown in Fig. 1; Fig. 3, an end elevation; Fig. 4, a side elevation of the tool-holder, showing the support formed of a separate piece and secured therein; and Fig. 5, a detail sectional view looking in the direction of the arrows, the section being taken on the line $x\ x$ of Fig. 4.

In cutting-tools of this general character it is very essential that the tool be held rigidly within the holder, so that the tool will not be permitted to vibrate up and down and thereby cause the work operated upon to be slightly rough or uneven. I do not wish to lay claim to a tool-holder having a recess or channel therein, within which recess or channel fits a cutting-tool; but such tool-holders without my improvements have heretofore been more or less defective, particularly when the cutting-tool has been reground a number of times, so as to shorten it very materially, because in that event more or less wear was brought to bear on the corner A, along the lower edge of the cutting-tool channel B, cast or otherwise formed in the tool-holder C, for the reason that the set-screw D was so nearly over the lower edge A that the cutting-tool while in operation fulcrumed, as it were, about said lower edge. In practice this edge gradually wore down, and when the cutting-tool became too short, as above described, it would not maintain its set position within the holder, which was a source of great annoyance and positive detriment. This difficulty I have overcome by projecting from the tool-holder a support E, which is preferably practically the same width as the cutting-tool, and consequently forms a support therefor along its under side beyond the holder proper. This support is preferably formed integral with said holder proper, although it will readily be understood that, if desired, it might be formed in any other suitable manner, such as by projecting a separate piece of metal within a recess in the holder proper and securing it therein by means of rivets, as shown in Fig. 5, its outer end projecting the same as in the preferred form. It will also be observed that the outer end of the support, as also the outer end of the tool-holder, is beveled, the support from its upper edge downward and backward to its lower edge, as shown at 3, while the tool-holder is beveled from the upper edge of the slot or recess 2 downward and rearward to its lower edge and upward and rearward to its upper edge, as shown at H and I, respectively. These bevels permit the cutting-tool to be worked closer to the tool-holder without their interfering with the work of cutting than would otherwise be the case.

Referring now to the cutting-tool itself, it will be observed that it is beveled downward and rearward from its upper edge and is also beveled from substantially midway between its sides rearward, as shown at a and b, respectively, for the purpose of permitting the tool to operate more readily without clogging.

I do not wish to confine myself to any particular shape of cutting-tool, as it is obvious that numerous shapes and forms of cutting-tools may be employed, the essential feature

of such invention being the projected bearing extending from the tool-holder proper upon which the cutting-tool is adapted to rest.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a tool-holder having a tool channel or recess therein with closed non-yieldable walls, a support extending beyond the body of said tool-holder and of the width of said channel, having its upper edge in line with said channel, a cutting-tool adapted to be inserted within said channel and be secured therein and supported by said support, the support having its vertical faces or edges substantially in line with the vertical faces of said cutting-tool, substantially as shown and described.

2. The combination with a tool-holder having a recess therein, a support adapted to extend within said recess and beyond said tool-holder and secured thereto and having its projecting end of substantially the same width as said channel, of a cutting-tool adapted to extend within a channel formed within the tool-holder between it and said support, and a screw adapted to screw upon said cutting-tool to hold it firmly within said channel.

3. The combination with a tool-holder having a recess therein and beveled downward and upward rearwardly from the upper edge of said recess, a cutting-tool adapted to project within said recess as also a support therefor, said support being secured to said tool-holder and projecting beyond the same to form an extended support for said tool, said support being of less width than said holder, substantially as shown and described.

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

DAVID B. HYDE.

Witnesses:
B. BLACKBURN ESTERLINE,
A. C. SLAGLE.