(No Model.)

H. HILL.

BORING TOOL.

No. 602,449. Patented Apr. 19, 1898.

Fig. 1.

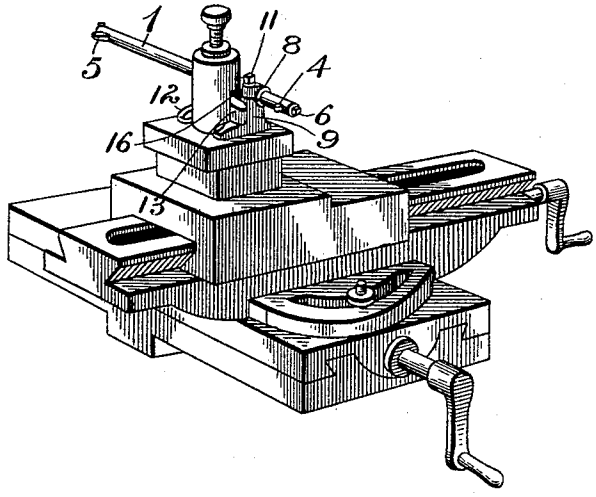


Fig. 2.

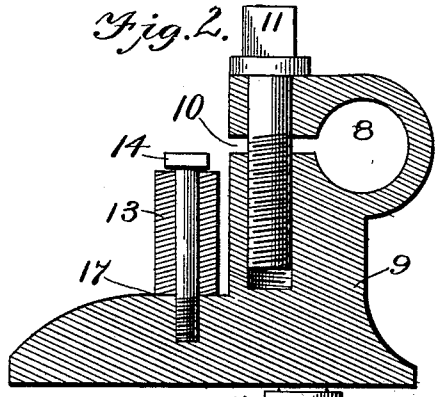


Fig. 3.

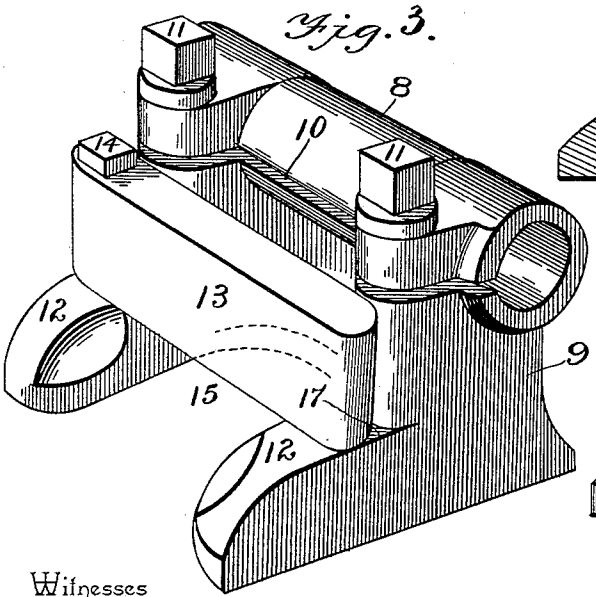
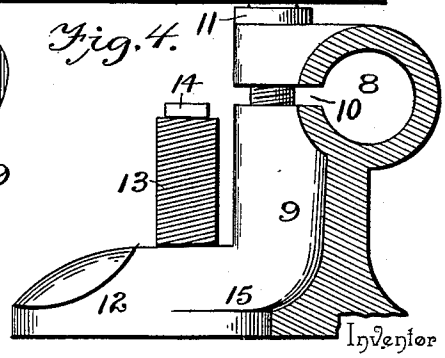


Fig. 4.



Witnesses
Edwin G. McKee

Inventor
Hugh Hill.

By his Attorneys,

C. A. Snow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HUGH HILL, OF ANDERSON, INDIANA.

BORING-TOOL.

SPECIFICATION forming part of Letters Patent No. 602,449, dated April 19, 1898.

Application filed April 15, 1897. Serial No. 632,301. (No model.)

To all whom it may concern:

Be it known that I, HUGH HILL, a citizen of the United States, residing at Anderson, in the county of Madison and State of Indiana, have invented a new and useful Boring-Tool, of which the following is a specification.

My invention relates to boring-tools for metal-working machines, and particularly to a boring-tool holder adapted for attachment to a lathe tool-post; and the object in view is to provide a tool of this class which is so constructed as to be absolutely rigid, and hence efficient under all ordinary conditions of use, while allowing adjustment of the boring-bar to suit the depth of the hole to be drilled and also while allowing for the use of the tool for either boring or turning without varying the adjustment of the tool-points, the attachment of the tool to an ordinary lathe tool-post being accomplished by clamping the same upon the transverse or cross slide without the use of the ordinary tool-post ring.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a boring-tool constructed in accordance with my invention applied in the operative position to a lathe tool-post. Fig. 2 is a transverse sectional view of the bar-holder. Fig. 3 is a detail view in perspective of the tongue and the contiguous portion of the bar-holder. Fig. 4 is a vertical section taken centrally of the bar-holder.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a bar which, as distinguished from corresponding parts of similar tools now in common use, is constructed of a single continuous piece of cold-rolled steel, and in the opposite ends thereof are broached transverse openings for the reception, respectively, of the tool-points 4 and 5. These tool-points are secured at the desired adjustment in the openings in which they are fitted by means of set-screws 6. This tool-bar is fitted in a seat 8 on the bar-holder 9, said seat being split or kerfed longitudinally, as shown at 10, and being fitted with set-screws or collar-screws 11, by which the width of the kerf may be reduced to contract the seat and thereby clamp the bar at the desired adjustment. The bar is adapted to be arranged at such an adjustment as to suit the depth of the hole to be bored; but the stiffness thereof, together with the efficiency of the clamping action afforded by the seat, provides the necessary rigidity, even when said bar is extended to its full length, whereby successive adjustments of the bar as the depth of the hole increases are unnecessary.

The bar-holder is provided with extensions or feet 12, to one of which is connected a tongue 13, said tongue being mounted upon a vertical pivot-screw 14 to swing in a plane parallel with the bar, and this tongue constitutes the means of connection of the tool with the tool-post of a lathe or similar machine. The tongue is inserted into the slot of the tool-post after removing the usual tool-post ring.

The extensions or feet with which the bar-holder is provided are arranged upon opposite sides of an open-sided recess 15, which is of a size to receive a tool-post, the same corresponding with the cross-sectional area of such tool-post, whereby when the tongue has been inserted through the slot of the tool-post, which is illustrated in the drawings at 16, and is drawn toward said tool-post until the latter fits in said recess the extensions or feet are arranged upon opposite sides of the tool-post, rest upon the transverse or cross slide which supports the tool-post, and the free end of the tongue rests upon the upper side of the extension or foot opposite to the one upon which it is pivotally mounted, the clamping action being accomplished by the means with which the tool-post is provided for that purpose. The upper sides of the extensions or feet of the bar-holder are provided with opposite flattened surfaces 17 to receive the pressure of the extremities of the tongue, and as the pressure of said tongue is applied directly to said extensions or feet the pivot-screw by which the tongue is connected with one of the extensions is relieved of all strain in operation.

Various changes in the form, proportion, and the minor details of construction may be

resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

1. A tool of the class described having a bar, a bar-holder provided with a bar-seat and means for securing the bar therein, said bar-holder being adapted to rest upon the transverse or cross slide of a tool-post, and a tongue pivotally mounted upon the bar-holder to engage a slot in the tool-post, substantially as specified.

2. A tool of the class described, having a holder provided with extensions or feet adapted to rest upon the transverse or cross slide of a tool-post, and a tongue adapted to extend through a tool-post slot, and resting upon said extensions or feet, substantially as specified.

3. A tool of the class described, having a holder provided with horizontal extensions or feet adapted to rest upon the transverse or cross slide of a tool-post, the intervals between said extensions or feet being adapted to receive the tool-post, and said extensions or feet having opposite flat upper surfaces, and a tongue adapted to extend through a tool-post slot and bearing terminally upon said flat surfaces of the extensions or feet, substantially as specified.

4. A tool-holder of the class described, having a holder provided with extensions or feet adapted to be arranged upon the transverse or cross slide of a tool-post upon opposite sides of the tool-post, and a tongue adapted to extend through a tool-post slot and rest terminally upon the upper sides of said extensions or feet, said tongue being pivotally mounted at one end upon one of said extensions or feet, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HUGH HILL.

Witnesses:
W. E. FITZGERALD,
EARL REEVE.