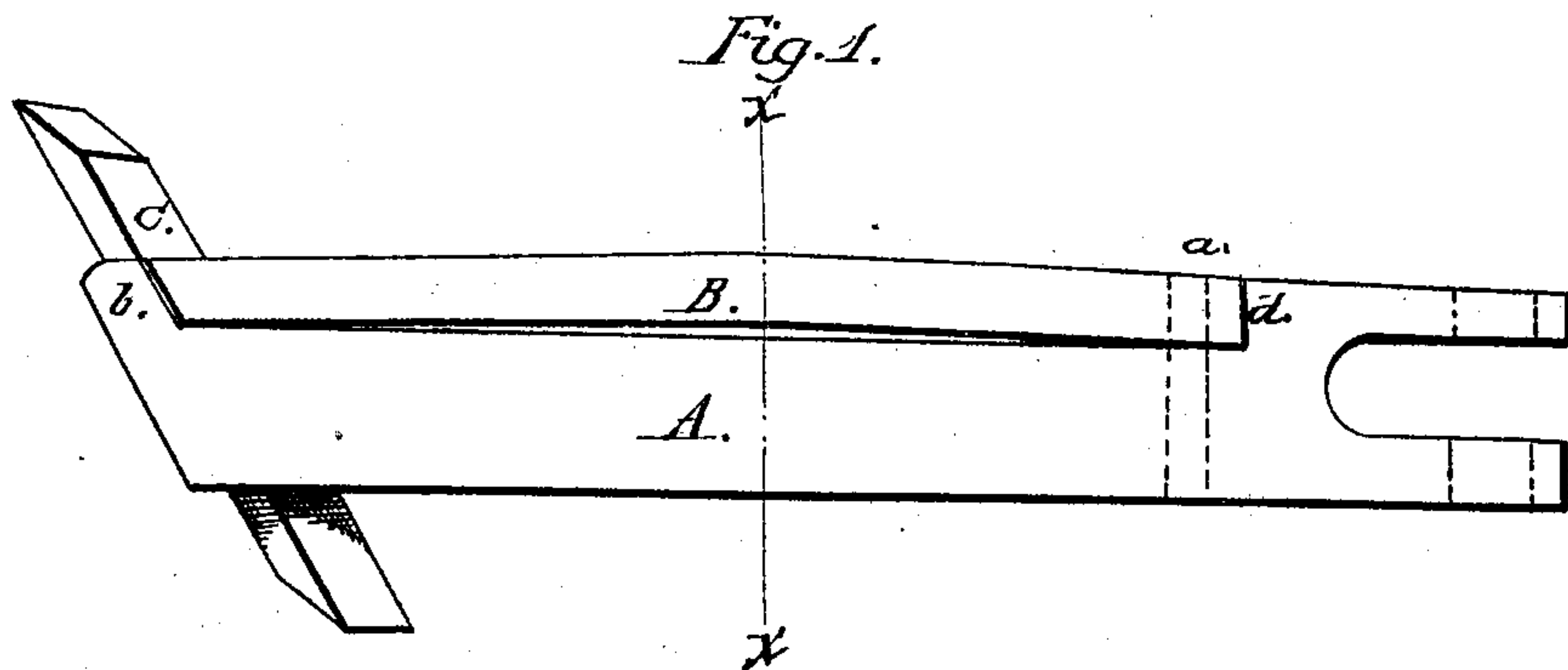


*H. D. Richardson,*

*Tool Holder.*

*No. 22,688.*

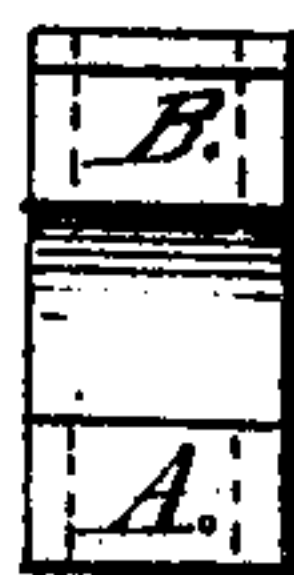
*Patented May 4, 1869.*



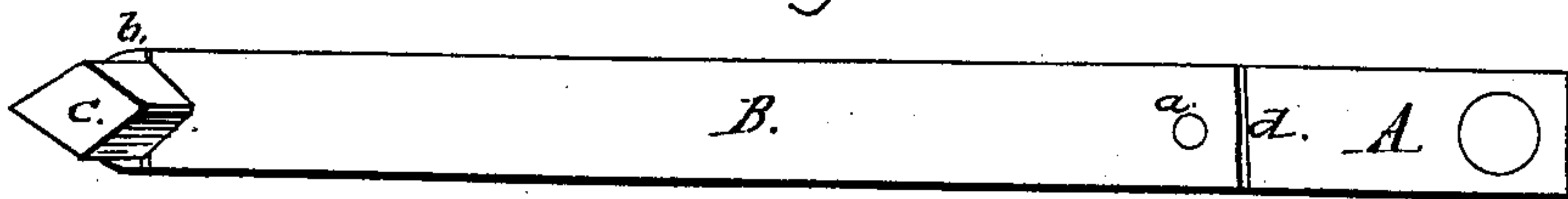
*Fig. 3.*



*Fig. 4.*



*Fig. 2.*



*Witnesses:*

*Geo. S. Clark*  
*Hugo Overmeyer*

*Inventor:*

*H. D. Richardson,*

# United States Patent Office.

H. D. RICHARDSON, OF EAST HAMPTON, MASSACHUSETTS, AS-  
SIGNOR TO HIMSELF AND J. W. WILSON, OF SAME PLACE.

*Letters Patent No. 89,688, dated May 4, 1869.*

## IMPROVED TOOL-HOLDER.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, H. D. RICHARDSON, of East Hampton, in the county of Hampshire, and State of Massachusetts, have invented a new and improved Tool-Holder; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a side elevation of said tool-holder, showing a tool inserted therein.

Figure 2 is a plan view of the same.

Figure 3 is a vertical sectional view, the plane of section being indicated by the line *z z* in fig. 1.

My invention is designed to be used upon turning-lathes, and is applicable to very many of those small cutting and finishing-tools which are employed in lathe-work, especially upon the metals and other substances where a fixed tool is used.

Various holding-devices have been devised for this purpose, all of which have been somewhat complicated and expensive, so far as I am aware.

My invention is designed to be operated at the same time and by the same act which clamps the holder into the tool-post, and does not require any change in the ordinary form of tool-post, having a vertical slot in it, and a set-screw, turning axially in the top of the post, so that the lower end of the screw can be made to press upon the tool-holder, or the shank of the tool itself, and bind it firmly in the post.

The construction of my invention is as follows:

The main part A is of sufficient thickness to fill the width of the slot in the tool-post, and has the right-angled projection *d* upon its upper edge, at the rear end, and the projection *b* at the opposite end.

An opening, or tool-socket is formed in A, of the usual inclination, to hold the cutting-tool C.

This socket may be rhomboidal, or rectangular in section, or of such conformation as to properly receive and hold the cutting-tool, which will usually be of nearly the form shown.

The clamping part B is of the same thickness as A, and of same height as the projection *d*.

One end of B rests against *d*, and is fastened to A, by the rivet *a*.

The other end is bevelled, to correspond with the inclination of *b*, and a small interval is left between *b*

and the end of B, to allow for the elongation of B, when the latter is straightened.

The part B is slightly curved upward, as shown in the drawings, and being made of well-tempered steel, will retain this curvature, after continued use.

If now the tool C be inserted in its socket in the end of A, and the holder be then thrust into the slot in the tool-post, and the set-screw in the latter be turned down so as to bind the holder in the post, it will, at the same time, press down the curved part B, so as to make its free end approach *b*, and, in so doing, it is evident that the tool C will be grasped between *b* and the end of B, and held as if in a vise.

Whenever the tool-holder is removed from the tool-post, or the set-screw loosened, the part B will resume its natural curve, and thus draw away from *b*, and release the tool C.

The form of the rear end of A is immaterial, and the dimensions of the holder and of the tool-socket will, of course, be adapted to the work to be performed, the kind of lathe to be used, and the form of the cutting or other tool to be applied.

The advantages of my invention in point of cheapness, durability, and effectiveness, can be readily perceived by an inspection of the drawings making a part of this description.

I am aware that if the rivet *a* were made sufficiently strong, the projection *d* might be omitted, and that *b* might also be discarded, thus throwing more of a bending strain upon the tool C, without, in either case, altering the principle of my invention, but I prefer the construction shown for purposes of strength and durability.

Having described my invention,

What I claim as new therein, and desire to secure by Letters Patent is—

A tool-holder, A, having a tool-socket formed therein, in combination with the curved clamping-part B, having one end fastened to A, and having its free end shaped so as to bear against the tool, the whole applied and operated substantially as set forth.

Witness my hand this 15th day of February, A. D. 1869.

H. D. RICHARDSON.

Witnesses:

GEO. S. CLARK,

HUGO OBEREMPT.