(No Model.)

J. H. PARKER.

ADJUSTABLE TOOL HOLDER FOR LATHES.

No. 426,311. Patented Apr. 22, 1890.

Fig. 1.

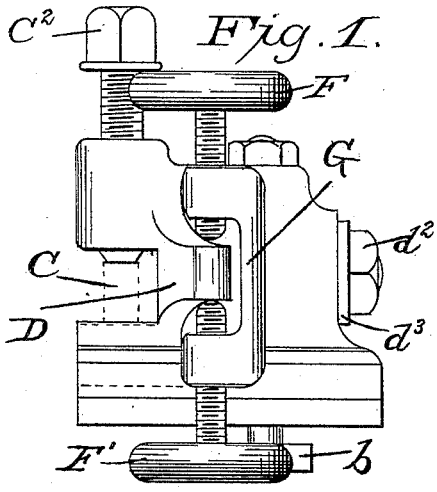


Fig. 2.

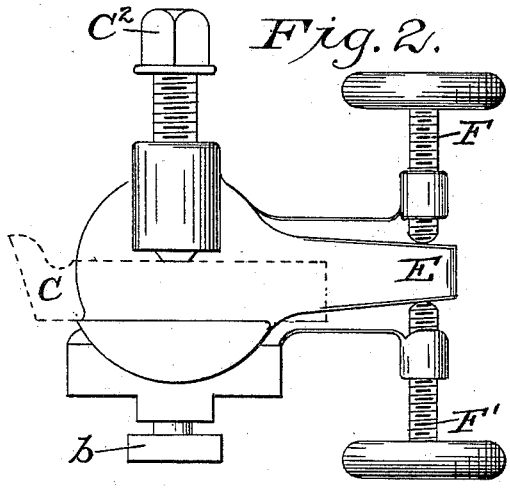


Fig. 3.

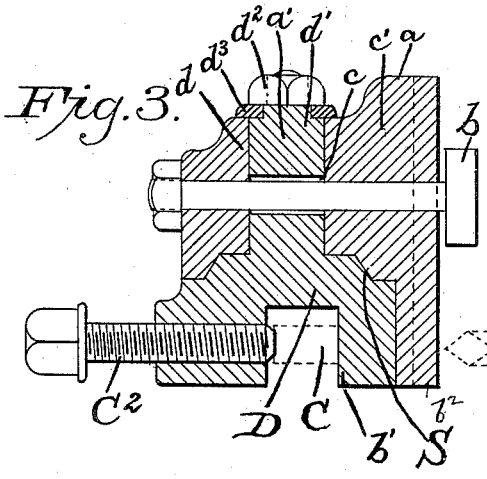
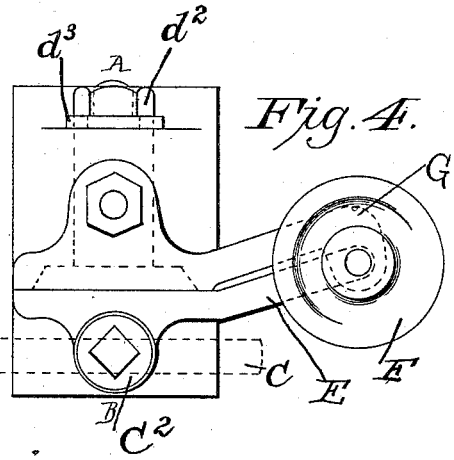


Fig. 4.



WITNESSES

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ADJUSTABLE TOOL-HOLDER FOR LATHES.

SPECIFICATION forming part of Letters Patent No. 426,311, dated April 22, 1890.

Application filed August 30, 1889. Serial No. 322,489. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. PARKER, a citizen of the United States, residing in the city of Baltimore, State of Maryland, have invented certain new and useful Improvements in Adjustable Tool-Holders for Lathes, of which the following is so full, clear, and exact a description as will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawings, in which—

Figure 1 is an end elevation of my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a section on the line A B, Fig. 4. Fig. 4 is a top plan.

The object of my invention is to provide an adjustable tool-holder which may easily be attached to any lathe in place of the ordinary tool-post, and be operated to adjust the tool to any degree of nicety while the lathe is in actual operation.

Another object of my invention is to provide a holder which may be operated with the greatest degree of accuracy and in the shortest space of time consistent with accuracy.

Another object of my invention is to provide a tool-holder of the character specified, which may be operated to adjust the tool in such a manner as not to interfere with the regularity of the work being done to such an extent as to make any variation in the channel being cut.

The device is constructed with special regard to the cutting of screw-threads.

In the accompanying drawings, *a* designates the head of the tool-holder, which is secured to the carriage or stock with which it slides by a bolt *b*, which passes through a perforation *c*, which is somewhat larger in diameter than the bolt *b*, which permits of a certain amount of play and facilitates the fine adjustment of the tool, as above set forth.

The tool-holder proper is designated by the letter D, and it is secured to the head *a* by extending through a perforation *d* in the head and at right angles to the line of the bolt *b*. The tool-holder proper is also provided at its junction with head *a* with a beveled projection S, which extends into the head *a* and is snugly fitted thereto. This projection gives additional strength to the holder D and enables it to stand the strain of the clamping-screw C^2 upon the tool being held by reason of said projection being tightly inclosed by the recess formed in the head *a* to receive it. This joint, in connection with the seat which the holder has on the platform B^2, gives the holder a very rigid support sufficient to withstand all ordinary working strains upon the tool while it is being operated and held in said holder.

The holder D has a projecting horizontal arm *d'*, which is provided at its outer end with a nut d^2 and a washer d^3, which hold it snugly in place and at the same time permit of a slight rotary adjustment. The holder D has a platform *b'*, which receives the tool C, and the tool C is clamped firmly to its seat on the platform by a set-screw C^2. Back of the platform *b'* and the set-screw C^2 extends a lever E, triangular in outline and with its smaller or tapered end free to move up and down between the stops or set-screws F and F', which serve as a means of raising and lowering this lever E, and as the lever E is cast integral with the tool-holder D any horizontal adjustment of the angle of this lever operates to adjust the tool in the tool-holder, as will be readily understood. A bifurcated bracket G supports the two set-screws F and F', as clearly shown in Figs. 1 and 2.

From the foregoing it will be readily understood that the adjustment of the tool is reduced to a nicety. By grasping the stop or set-screw F with one hand and the other stop or set-screw F' with the other hand and turning them in the same directions with relation to the free end of the lever E, the angle of the tool may be adjusted to suit the operator without giving it any play, thus avoiding all lost motion and jarring and consequent irregularity in the work which is being done by the tool C. There are other ways in which the movement of this lever E might be obtained—such, for example, as having an adjusting-screw pass through the end of said lever and provided at each end with a collar or nut and a crank or other device for revolving on its upper end, or having the end of the arm turned concentric with the center of horizontal arm *d'* and formed with threads to partly engage the screw, or, further, by having the adjusting-screw provided with two shoulders or collars, which shall inclose the

end of said lever and thus provide for the adjusting movement by the vertical motion of said screw when being revolved. These modifications have all occurred to the inventor and are claimed by him, and while there may be advantages in some respects over the present manner, in that they can be operated by one hand, they are all open to the objection of having lost motion or play in their parts, especially when they have been used for some time. The preferred construction, therefore, is that shown.

Other obvious modifications will suggest themselves, and it will be understood that several of the details of construction might be varied and equivalents substituted therefor without departing from the spirit of my invention and without materially impairing its usefulness. I therefore do not wish to be understood as limiting myself to the exact construction shown; but

What I believe to be broadly new, and what I therefore claim, is—

1. In an adjustable tool-holder for lathes, a tilting holder provided with a projecting-lever, in combination with independently-adjustable means disposed on opposite sides of said lever and adapted to act on the same to tilt the holder.

2. In a tool-holder for lathes, a head *a*, having a perforation, a tool-holder proper D, extending through said perforation and formed with a beveled projection located within a correspondingly-shaped recess in the head *a*, and also with a platform *b'* and a clamping-screw, as C^2, all substantially as shown and described.

3. In an adjustable tool-holder for lathes, a tilting holder provided with a projecting-lever, in combination with a bifurcated bracket G, and set-screws supported by the arms of said bracket and independently adjustable therein, said set-screws being located in opposite sides of said tilting lever and adapted to act on the same to adjust the holder.

4. An adjustable tool-holder consisting of a head or block provided with a tool-holder proper pivotally secured thereto and adapted to rotate within predetermined limits with relation to the head or block, and stops or other devices adapted to operate on the rotating or tilting holder to adjust the tool-holder proper to any desired angle of adjustment and holding the same in its adjusted position, substantially as described.

5. In an adjustable tool-holder for lathes, a tilting holder mounted on a head or block and provided with an extended tilting lever and a tool-seat and clamp, in combination with a pair of independently-adjustable set-screws disposed on opposite sides of the tilting lever, substantially as and for the purposes specified.

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

JOHN H. PARKER.

Witnesses:
HENRY STOCKBRIDGE,
JOHN P. PACA.