W. L. CAILIN.

LATHE TOOL HOLDER.

APPLICATION FILED SEPT. 2, 1919.

1,383,981. Patented July 5, 1921.

Fig. 1.

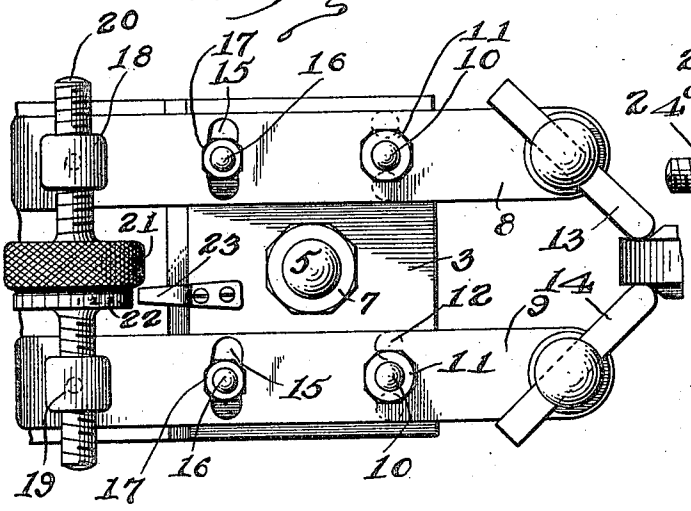


Fig. 4.

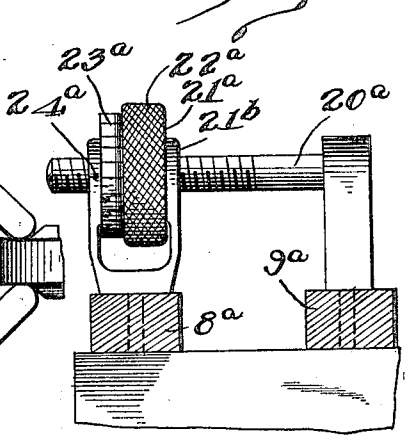


Fig. 2.

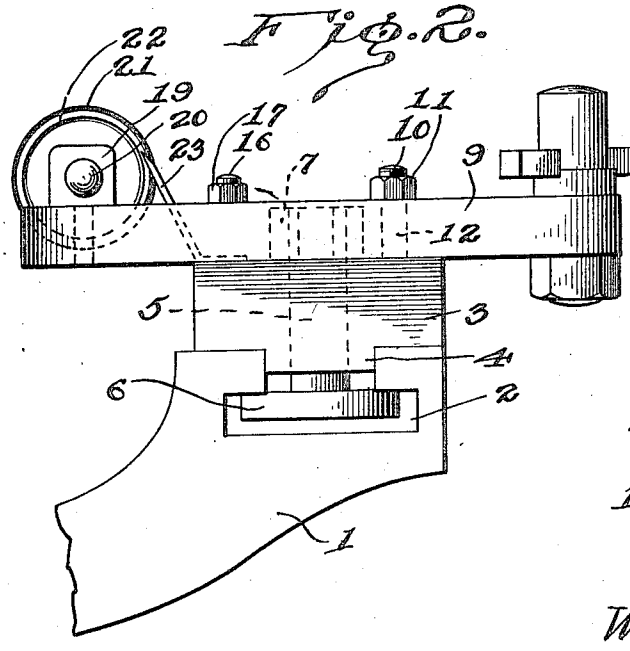
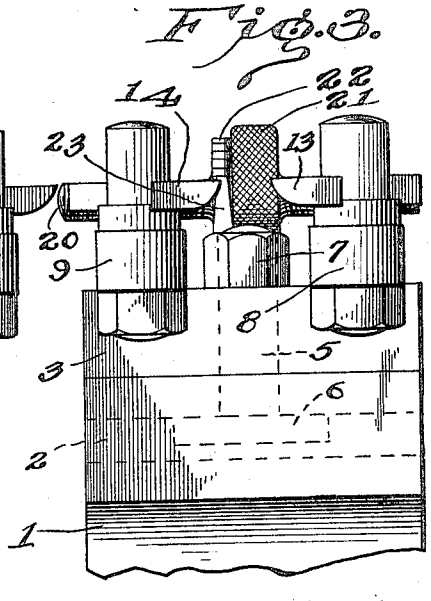


Fig. 3.



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LATHE-TOOL HOLDER.

1,383,981. Specification of Letters Patent. Patented July 5, 1921.

Application filed September 2, 1919. Serial No. 321,128.

To all whom it may concern:

Be it known that I, WILLIAM L. CATLIN, a citizen of the United States, residing at Chattanooga, in the county of Hamilton and State of Tennessee, have invented certain new and useful Improvements in Lathe-Tool Holders, of which the following is a specification.

This invention relates to improvements in duplex tool holders, particularly designed for use with engine lathes for facing both sides of gear blanks, flanges, etc. The invention is in the nature of an attachment which can be used for turning periphery, and may also be used on a lathe which is provided with multiple stops, one tool being used for roughing and the other for finishing.

It is the common practice in many shops where automatic lathes are not used, to use a single tool for facing each side of a flange or blank, this requiring in every case several settings of the tool, and frequent changes to secure the proper widths.

The object of the present invention is to provide an improved tool holder which includes means for holding a plurality of different tools, one of which will act upon one part of the work and another of which will operate upon a different part of the work.

Another object of the invention is to provide a device of this character which may be adjusted to work upon standard dimensions, so that other work may be operated upon and brought to the standard dimensions.

A further object is to furnish a duplex tool capable of operating upon work of various widths and which may be adjusted to accommodate different classes of work.

With the foregoing objects outlined and with other objects in view, which will appear as the description proceeds, the invention consists in the novel features hereinafter described in detail, illustrated in the accompanying drawing and more particularly pointed out in the appended claims.

Referring to the drawing,

Figure 1 is a top plan view of my improved duplex tool holder and showing the tools engaging a work piece.

Fig. 2 is a side view of the same.

Fig. 3 is a front end view.

Fig. 4 is a rear end view of a modification.

In the drawing, 1 represents a tool slide on a lathe carriage and this slide is provided with a T-shaped slot 2, which has its vertical portion opening upwardly. Resting on the upper face of the tool slide, is a base plate or tool holder 3 having a downwardly extending guide 4 which rests in the vertical portion of the slot 2 and a bolt 5 has its head 6 located in the horizontal portion of the slot 2 and is provided with a nut 7. By loosening the nut 7 the plate 3 may be permitted to slide along the tool slide 1 and when the nut is tightened, it will firmly lock the plate 3 and tool slide together.

The base plate 3 supports a plurality of levers 8 and 9 which are pivoted or fulcrumed on bolts 10 carried by the base plate and provided with nuts 11. The bolts 10 pass through apertures 12 in the base plate 3 and a series of these apertures are provided for each bolt, so that the fulcrums of the levers 8 and 9 may be adjusted toward or away from each other to permit the tools 13 and 14 to operate upon work pieces of various widths. The rear portions of the levers 8 and 9 are provided with arc-shaped slots 15, through which pass bolts 16 carried by the base plate 3 and having nuts 17. These nuts are used for clamping the levers 8 and 9 in various positions and for holding the tools 13 and 14 in engagement with the work.

It will be noted that the diameter of each bolt 16 is less than the width of each slot 15, to permit proper coöperation of the bolts and slots when the bolts 10 are shifted in the various apertures 12.

The extremities of the levers 8 and 9 are provided with nuts 18 and 19, one of which has a right hand thread and the other of which has a left hand tread and these nuts 18 and 19 engage the threads of a bolt 20 having threads on one side of one pitch and threads on the other side of opposite pitch. The bolt 20 constitutes an adjusting means for the tools 13 and 14 and it is provided with a milled hand piece 21 and a graduated dial 22, said dial coöperating with a pointer 23 carried by the base plate 3.

In operation, the tools are set first for the roughing cut, and the operator notes the position of the dial 22 relative to the pointer 23, and after the roughing cut is taken, the hand piece 21 is turned to set the tools for the finishing cut, and the operator notes the position of the dial for the proper position of the tools during the finishing cut. On the subsequent pieces, it is only necessary to

turn the piece 20 to the positions determined on the first piece operated upon. By this arrangement, the operator is enabled to first set the tools to accommodate standard sizes during the roughing and finishing cuts and he can then obtain the identical cuts on subsequent pieces by setting the dial 22 in the same position which it occupied during the first cuts.

In the embodiment of the invention illustrated in Fig. 4, the levers 8^a and 9^a are adjusted by means of a non-rotatable threaded bolt 20^a which is carried by the lever 9^a and coöperates with a nut 21^a, which is mounted between the arms of a fork 21^b, that is mounted on the lever 8^a. The nut 21^a has a portion of its periphery roughened, as shown at 22^a, to provide a hand piece and the remainder of its periphery fashioned to provide a dial 23^a, that coöperates with a mark or point 24^a provided upon one of the arms of the fork 21^b. It will be seen that by turning the hand piece 22^a, the levers 8^a and 9^a may be moved toward or away from each other and in this manner, tools supported by the levers may be adjusted toward or away from the work piece.

I am aware that various changes and modifications may be made in the constructions illustrated and described without departing from the spirit of the invention as set forth in the following claims.

What I claim and desire to secure by Letters Patent is:—

1. A lathe tool holder comprising a base plate, a plurality of levers having their intermediate portions pivotally mounted on said base plate, a tool carried at one end of each lever, a threaded member connecting the opposite ends of said levers, a single hand engaging member mounted on the threaded member for causing movement of the tools toward or away from each other, and a dial and pointer for indicating various adjustments of said levers.

2. A lathe tool holder comprising a base plate, a plurality of levers having their intermediate portions pivotally mounted on said base plate, a tool carried at the front end of each lever, a nut carried by each lever, a movable member having oppositely pitched threads engaging said nuts, a hand engaging member fixed to said member for causing movement of the tools toward and away from each other, and means for indicating various adjustments of said levers.

3. A lathe tool holder comprising a base plate having a plurality of series of alined apertures, a plurality of pivot pins detachably mounted in a plurality of said apertures, levers pivotally mounted on said pins and each carrying a tool, a threaded member connecting said levers, and a single hand engaging member mounted on the threaded member for causing movement of the tools toward or away from each other.

4. A lathe tool holder comprising a base plate, a plurality of levers having their intermediate portions pivotally mounted on said base plate, said levers being provided with arc-shaped slots, threaded pins mounted on the base plate and extending through said slots, nuts engaging said pins for locking the levers in adjusted positions, tools carried by the front ends of said levers and adapted to operate on opposite sides of a work piece, nuts mounted on the rear ends of said levers, a member having oppositely pitched threads engaging said last named nuts, a hand engaging member and a dial fixed to said threaded member, and a pointer coöperating with said dial for indicating various adjustments of said levers.

WILLIAM LYLE CATLIN.