V. H. AURICH & A. CIHAK.

TOOL HOLDER.

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Fig 1.

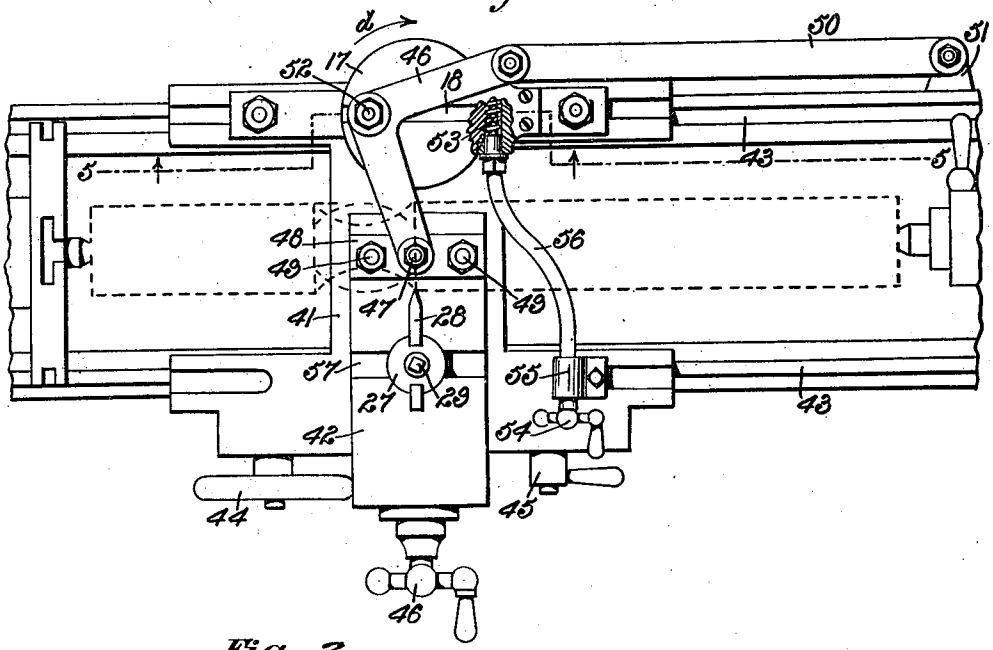
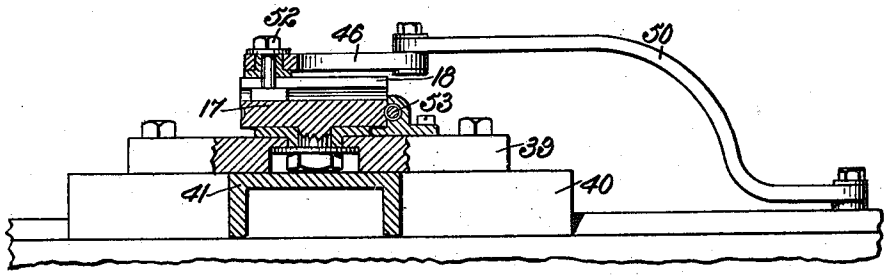


Fig 2.



WITNESSES

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TOOL-HOLDER.

1,230,647. Specification of Letters Patent. Patented June 19, 1917.

Application filed July 15, 1916. Serial No. 109,460.

To all whom it may concern:

Be it known that we, VICTOR H. AURICH, a citizen of the United States, and ALOIS CIHAK, a subject of the Emperor of Austria, both residents of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and improved Tool-Holder, of which the following is a full, clear, and exact description.

Among the principal objects which the present invention has in view are: to provide mechanical means for controlling the path of operation of a metal-cutting tool; to provide means for setting the radius of the path of the cutting edge of said tool; and to provide a scale for setting the cutting tool and the radius of operation thereof.

Drawings.

Figure 1 is a top plan view of a modified form of the holder and of the mounting provided therefor;

Fig. 2 is a section taken as on the line 5—5 in Fig. 4.

Description.

In the drawings is shown a table 17 on a base 39, which is fixedly mounted on a sliding feed table 40. The table 40 has side rails and a central bridge 41 on which the cross slide 42 is slidably disposed.

The table 40 has end extensions which fit the rails 43 of a conventional lathe and is provided with the usual hand feed wheel 44 and automatic clutch 45. The cross slide 42 is provided with a hand-operated feed mechanism embodying the rotary handle 46.

When the table 40 and cross slide 42 are operated in accordance with the present invention, the wheel 44, clutch 45 and handle 46 are released so as not to interfere with the movement of the table 40 and cross slide 42 which are controlled by the invented tool holder.

The table 17 is pivotally connected with a bell crank lever 46, one arm of which is pivotally connected by a bolt 47, to a plate 48. The plate 48 is permanently mounted by bolts 49 on the cross slide 42. The opposite arm of the lever 46 is pivotally connected by a link bar 50 with a bracket 51. The bracket 51 is made fast to the back rail 43 of the lathe. The bolt 52 forms the movable adjustable pivot for the crank lever 46.

The table 17 is turned by means of a worm 53, which is operated from a handle 54 mounted on the table 40 at the front of the lathe by means of the bearing bracket 55. The handle 54 is operatively connected with the worm 53 by means of a flexible shaft 56. The table 28 and tool post 27 are held on the cross slide 42 in the conventional manner, the said cross slide being provided with an undercut slot 57 to receive the said tool post.

The tool 28 having been set and the bolt 52 having been disposed in the table 17 and in the slot 18 thereof, the attendant feeds the machine by turning the handle 54. This rotates the table 17 which moves the bolt 52 on the half circle away from the "work" or toward the "work" as the case may be. If the bolt 52 is moved away from the "work" the resulting cut in the metal being operated upon is a concave groove, which is the result of the combined movement of the cross slide 42 transverse the lathe and the movement of the table 40 lengthwise thereof. It is obvious that if the table 17 is turned from the position shown in Fig. 1 of the drawings, so that the said table is moved clockwise as per the arrow *d*, the lathe mechanism 46 and link 50 coöperate to draw the cross slide 42 toward the center of the work, which is shown by dotted lines in said figure, while the link 50 operates as a brace resting on the stationary bracket 51, which enables the table 17 to move forward with the table 40 the full length of the cut to be performed. The sum of the two movements produced the cut desired.

It is equally evident that if the table 17 be rotated in the direction reverse to that indicated by the arrow *d*, the reverse movement of the cross slide 42 would be effected but the same movement of the table 40 would result. This would produce the convex cut, referred to and described as the result of the operation of the mechanism shown in Figs. 1 and 2.

Claims.

1. In a tool-holder, the combination of a pivot bracket adapted to be rigidly mounted on a lathe bed at the side of the rails thereof; a rotary table having a positioning slot coinciding with the center of said table; a movable pivot mounted in said slot; means for locking said pivot in said slot; a freely movable cross slide; a tool and tool-post therefor mounted on said slide; rocking means pivotally connecting said pivot on said rotary table and said slide; a link piv-

otally connecting said rocking means and said pivot bracket; and means manually operative for rotating said rotary table.

2. In a tool-holder, the combination of a pivot bracket adapted to be rigidly mounted on a lathe bed at the side of the rails thereof; a rotary table having a positioning slot coinciding with the center of said table; a movable pivot mounted in said slot; means for locking said pivot in said slot; a freely-movable cross slide; a tool and tool post therefor mounted on said slide; rocking means pivotally connecting said pivot on said rotary table and said slide; a link pivotally connecting said rocking means and said pivot bracket; and means manually operative for rotating said rotary table, said means embodying a screw-threaded member engaging said table, a rotary handle, and a flexible shaft operatively connecting said screw-threaded member and said handle.

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