G. A. ROLLINS.

Tool Rest.

No. 10,582. Patented Feb. 28, 1854.

Fig. 4.

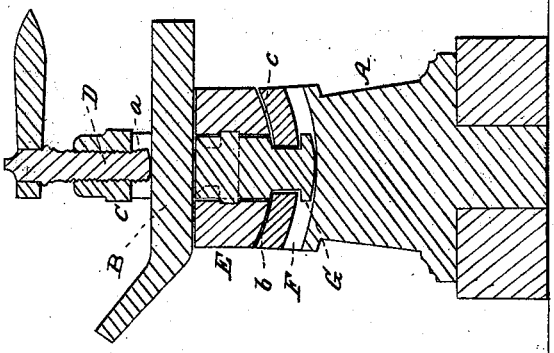



Fig. 3.

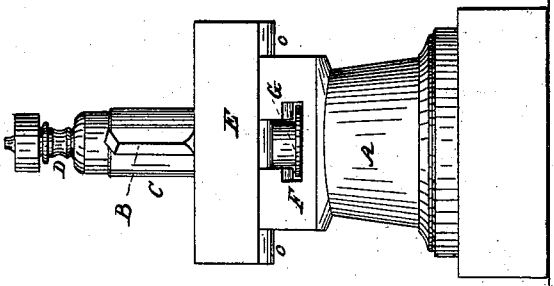



Fig. 2.

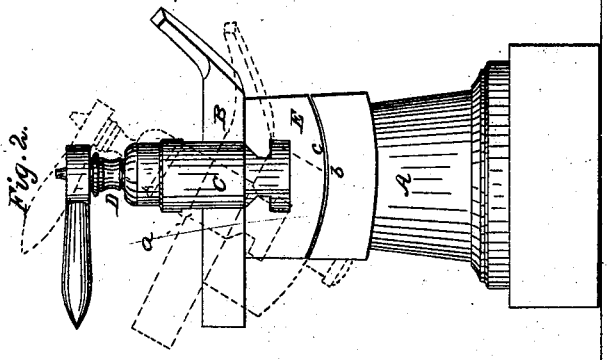



Fig. 5.

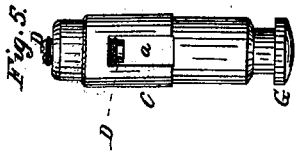
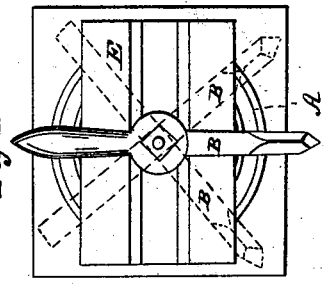



Fig. 1.



# UNITED STATES PATENT OFFICE.

GEO. A. ROLLINS, OF NASHUA, NEW HAMPSHIRE.

## TOOL-REST FOR TURNING-LATHES.

Specification of Letters Patent No. 10,582, dated February 28, 1854.

*To all whom it may concern:*

Be it known that I, GEORGE A. ROLLINS, of Nashua, in the county of Hillsboro and State of New Hampshire, have invented a new and useful means or Mechanism for Supporting and Adjusting the Cutting-Tool on a Tool-Post of an Engine Turning-Lathe; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, letters, figures, and references thereof.

Of the said drawings, Figure 1 denotes a top view of the said invention. Fig. 2 is a side elevation of it. Fig. 3 is a front elevation, and Fig. 4 is a vertical, central and transverse section taken lengthwise through the cutting tool.

A in the said drawings represents the tool post; B the cutting tool, and C the tool holder, which is provided with a passage or mortise, *a*, for the tool to extend through and a screw, D, for holding or clamping the tool in place. A side view of the tool holder is given in Fig. 5. The top of the post is provided with a concave seat or bearing, *b*, which in its cross section is the arc of a circle, (as seen in Figs. 2 and 4,) and is made to correspond with the convex curved surface of the lower side, *c*, of a movable block, E, on the top of which the tool rests. The cross section of the underside of the tool rest, E, is the arc of a circle having the same radius as that of the section of the concave bearing *b*. Below the bearing, *b*, and transversely of it the cap or top of the post is provided with a curved groove, F, whose cross section is a trapezoid or is made as seen in end view in Fig. 3, the said groove being made to extend entirely across the cap of the post and curved lengthwise parallel to the curve of the bearing *b*. The groove, F, which may be termed a dovetail groove is made to receive a circular bead, G, that is formed on the lower end of the tool holder as seen in Figs. 4 and 5, the said tool holder being made cylindrical below the tool and to extend through a cylindrical hole bored through the tool rest. The object of so making the tool holder is to enable it with the tool to be turned in horizontal directions as shown by dotted lines in Fig. 1.

The curved seat or bearing, *b*, and the convex curved bottom of the rest, E, enable the angle of inclination of the tool to the article to be turned to be varied or the cutting edge of the tool readily raised or lowered and set in a correct position with respect to the surface of the article to be operated on.

In Fig. 2 I have represented by dotted lines the positions of the movable parts and the tool when the latter is very much inclined to the horizontal plane. By turning the screw down upon the tool, both the tool and its rest will be clamped or firmly held in the positions in which at any time they may be arranged. The efficiency of the said mechanism for adjusting the tool in a lathe is very great, and its simplicity renders it of much importance.

I am aware that the tool post of a lathe has been fixed on a plate or platform that could be inclined by means of a screw, therefore I do not claim such, but

I claim—

The improvement of combining with the tool post and tool holder a separate rest block, E, in combination with making the said rest block and the post, respectively, with convex and concave vertical bearing surfaces—the tool holder with a head or dovetail and the tool post with a curved trapezoidal or dovetail groove, F, as specified, whereby the cutting tool may not only be set to any angle of inclination, but the said tool and rest simultaneously confined in position by the downward action of the screw of the tool holder against the tool as described.

In testimony whereof I have hereto set my signature this tenth day of October, A. D. 1853.

G. A. ROLLINS.

Witnesses:

A. W. SAWYER,

MIAL DAVIS.