No. 829,081. PATENTED AUG. 21, 1906.

E. R. MORAS.

TOOL HOLDING AND SELF LOCKING ATTACHMENT.

APPLICATION FILED FEB. 4, 1905.

Fig. 1.

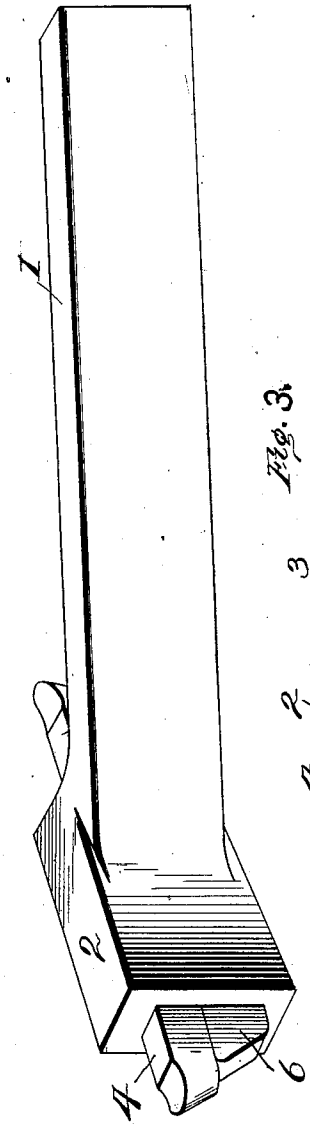


Fig. 3.

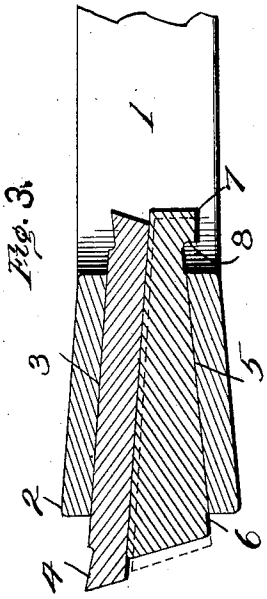
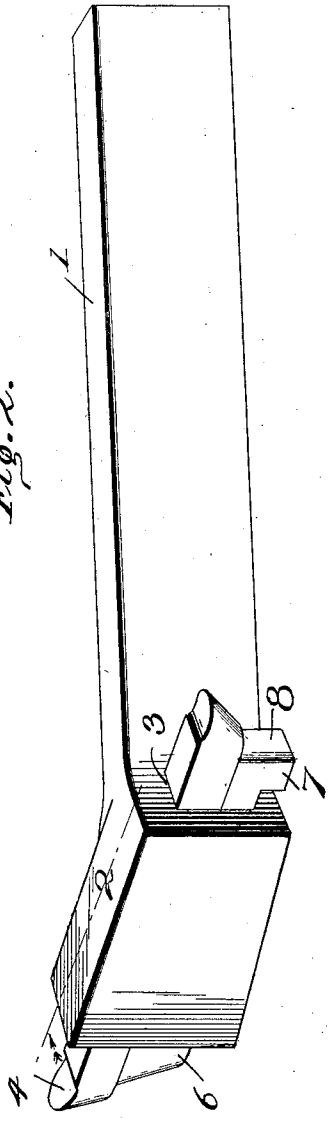


Fig. 2.



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TOOL-HOLDING AND SELF-LOCKING ATTACHMENT.

No. 829,081. Specification of Letters Patent. Patented Aug. 21, 1906.

Application filed February 4, 1905. Serial No. 244,187.

To all whom it may concern:

Be it known that I, EDMOND R. MORAS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Tool-Holding and Self-Locking Attachments; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to tool-holders for lathes, planers, &c.; and its object is to provide a reversible device of this character in which a cutting-tool of any ordinary construction can be disposed so as to cut either to the right or to the left without necessitating the use of a "right" or "left" holder therefor.

A still further object is to provide means for securely locking a cutting-tool within the holder without the use of nuts, screws, &c., so that the tool and its locking device can be quickly detached or placed in position without employing any tools for securing that result.

With the above and other objects in view the invention consists of a tool-holder comprising a shank at one end of which is disposed an offset having a passage extending longitudinally therethrough, said passage being disposed at an angle to the shank. Opposite walls of the passage are tapered toward each other and are disposed in planes which are at the same angle to the longitudinal center of the passage, so that a cutting-tool can be inserted within the passage and clamp against one wall thereof when it is desired to cut to the right or reversed and clamp against the opposite wall when it is desired to cut to the left, the tool in both instances maintaining the same relation to the longitudinal center of the passage and to the shank of the offset.

The invention also consists of certain other novel features of construction and combination of parts, which will be hereinafter more fully described, and pointed out in the claims. In the accompanying drawings I have shown the preferred form of my invention.

In said drawings, Figure 1 is a perspective view of my improved reversible tool-holder. Fig. 2 is a similar view looking at said tool-holder from the opposite side and showing the cutting-tool therein located so as to cut in a direction opposite to that cut by the tool shown in Fig. 1, and Fig. 3 is a longitudinal section through the offset and the parts located therein.

Referring to the figures by numerals of reference, 1 is a shank adapted to be connected to a lathe or other machine in any ordinary manner, and extending at an angle from the end of this shank is an offset 2, in which is formed a passage which extends longitudinally through the offset, and the walls 3 and 4 of this passage converge rearwardly and are located in planes which are at the same angle to the longitudinal center of the passage. A cutting-tool 4 of any desired form is adapted to be placed within the passage and to be clamped against either wall 3 or 5, and this tool is held in position against either of these walls by means of a locking-wedge 6, having a laterally-extending lug 7 at its small end which forms a shoulder 8, adapted to overlap a portion of the rear end of the offset, so as to limit longitudinal movement of the wedge in one direction and to practically prevent its accidental displacement.

In using the holder herein described the same can be utilized for holding a tool with which it is desired to cut either to the right or to the left. If it is desired to cut toward the right with the tool 4, the shank is so placed within the lathe that the offset 2 will extend to the right, as shown in Figs. 2 and 3. The locking-wedge 6 is then inserted into the passage in the offset, so as to rest upon the lower wall 5 of said passage and with its shoulder 8 in substantially the position shown in Figs. 2 and 3. The cutting-tool 4 is then inserted between the locking-wedge and the wall 3, after which the wedge 6 is driven longitudinally, so as to bind the cutting-tool against the wall 3. The tool can then be utilized for cutting to the right. If it is desired to cut to the left, the shank 1 and its offset are reversed, so as to point to the left, as shown in Fig. 1. The cutting-tool 4 is then removed by tapping upon the small end of the wedge, so as to release the tool and wedge. The wedge is then reinserted within the passage, so that it will rest upon the lower wall 3, and the cutting-tool is inserted between the wedge and the wall 5. The parts are then bound by forcing the wedge inward longitudinally, after which the tool can be utilized for cutting to the left and will be equally as effective and will have exactly the same relation to the shank 1 as when the tool is cutting to the right. It will of course be understood

that in both instances the surface containing the cutting edge of the tool is arranged uppermost.

By employing an offset such as herein described a double tool, such as shown in the drawings, may be used. The provision of the peculiar form of passage through the offset enables me to dispense with the right and left holders which are ordinarily employed, and instead it is only necessary for me to utilize one holder, which can be quickly placed in position for holding a tool so as to cut in either direction.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A reversible tool comprising a shank, an offset at one end thereof provided with a passage which extends longitudinally therethrough, opposite walls of said passage converging toward the shank and disposed at the same angle to the longitudinal center of the passage, and a clamping-wedge detachably mounted within the passage and coöperating with either of the converging walls, said wedge adapted, with a tool, to fill all portions of the passage.

2. A reversible tool comprising a shank having an integral offset at one end thereof and provided with a passage extending longitudinally therethrough, opposite walls of said passage converging toward the shank and disposed at the same angle to the longitudinal center of the passage, a cutting-tool within the passage and extending therefrom, and a clamping and locking wedge within the passage and between the cutting-tool and either of the converging walls of the passage, said wedge and tool filling all portions of the passage.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDMOND R. MORAS.

Witnesses:
EDGAR THERIAULT,
WILLIAM JAMES CONLEY.