R. J. SAUM.

TOOL HOLDER.

APPLICATION FILED MAY 27, 1915.

1,168,428. Patented Jan. 18, 1916.

Fig 1

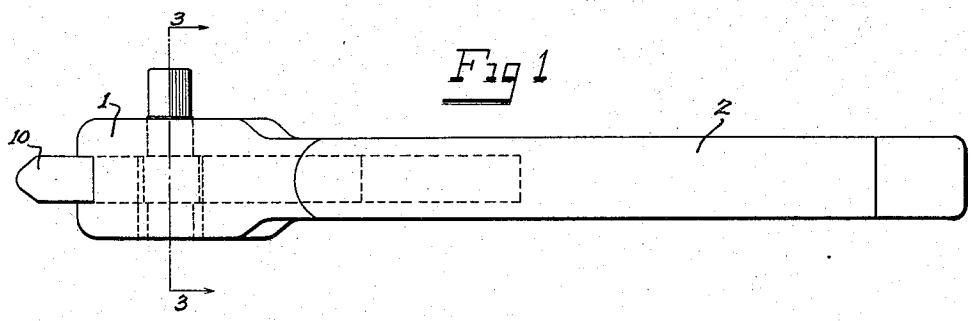


Fig 2

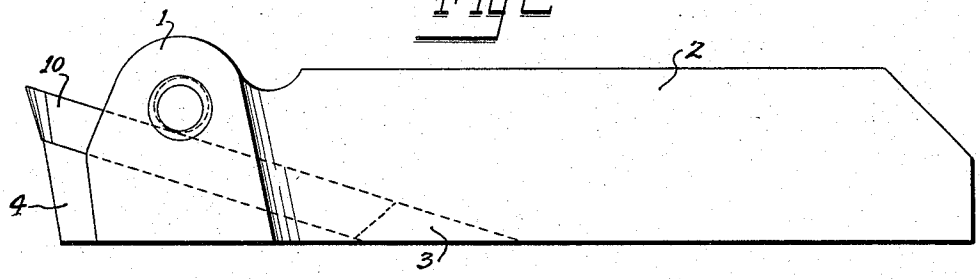


Fig 3

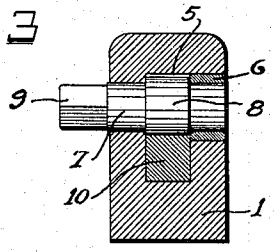


Fig 4

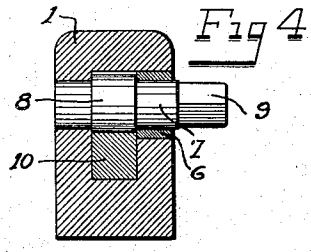
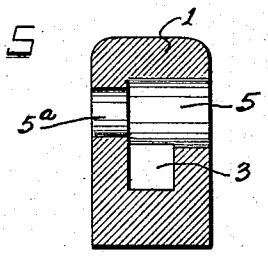


Fig 5



Witnesses

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TOOL-HOLDER.

1,168,428. Specification of Letters Patent. Patented Jan. 18, 1916.

Application filed May 27, 1915. Serial No. 30,752.

To all whom it may concern:

Be it known that I, ROBERT J. SAUM, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Tool-Holders, of which the following is a specification.

This invention relates to improvements in tool holders for lathes.

The object of my invention is to provide a clamping device for securing the tool in the holder of such character as to be readily reversed in its bearings to compensate for wear.

A further object of the invention is to provide a construction by which the tool may be more firmly supported than in previous constructions.

In the accompanying drawings:—Figure 1 is a top plan view of a device embodying my improvements. Fig. 2 is a side elevation of the same. Fig. 3 is a section on the line 3—3 of Fig. 1. Fig. 4 is a similar section showing the clamping cam in reversed position. Fig. 5 is a similar section with the tool and its clamping device removed.

Like parts are represented by similar characters of reference in the several views.

In the said drawings, 1 represents the head of the holder and 2 the shank thereof, the same being provided with an upwardly extending channel 3 for the reception of the tool. The head of the holder is also provided with a forwardly extending tool support 4, of a width substantially the same as that of the channel 3; the upper surface of said support having the same inclination as the bottom of the channel and standing coincident therewith. Extending transversely across the head 1 and communicating with the upper portion of the channel 3 is a bore 5, one end of which is reduced as indicated at 5^a the reduced portion of this bore extending from one side of the channel 3 to the adjacent outer side of the head 1. 6 represents a removable bushing which is inserted in enlarged portion of the bore, between the opposite side of the channel 3 and the other side of the head 1, the inner diameter of this bushing being the same as that of the bore. Located in the reduced bore and bushing is a shaft 7 having a centrally arranged cam 8, lying coincident with the channel 3, one end of the shaft 7 being provided with an extension 9 for the reception of a wrench or other tool for the purpose of turning the shaft to cause the cam to engage the tool 10 to clamp the same in the holder.

In the operation of the device, the parts may be first assembled as shown in Fig. 3. When the wear on the cam has become such as to interfere with the proper operation of the clamping device, the cam shaft 7 and its cam, as well as the bushing 6 may be removed, and the shaft and its cam reversed to the position shown in Fig. 4, so that that end of the shaft to which the power is applied will be located in the bushing 6, which reversal will bring the unworn surface of the cam into position to engage and clamp the tool. Further, this reversal may be made to obviate any difficulty encountered by reason of the projection 9 interfering with the work being performed by the tool on the particular side on which it may be located.

Having thus described my invention, I claim:—

1. A tool holder having a tool receiving channel and a bore substantially at right angles to said channel communicating with same, said bore being of different dimensions, a bushing located in the larger end of said bore having an interior diameter corresponding to the diameter of the small end of said bore; a cam shaft having the opposite ends thereof of substantially the same diameter, and a cam portion intermediate the ends, said cam shaft having one end journaled in the small end of said bore and the other in said bushing, said cam portion on said shaft being capable of being inserted through the large bore and lying substantially co-incident with said tool receiving channel, substantially as specified.

2. A tool holder having a tool receiving channel and a bore arranged at right-angles to said channel and communicating with the same, said bore being of different dimen-

sions, a removable bushing located in the large end of said bore having an interior diameter corresponding to the diameter of the small end of said bore, and a cam shaft having one end journaled in the small end of said bore and the other in said bushing, and a cam on said shaft capable of being inserted through the large end of said bore and lying coincident with said tool receiving channel.

In testimony whereof, I have hereunto set my hand this 7th day of April, 1915.

ROBERT J. SAUM.

Witnesses:
CHAS. L. WELCH,
EFFA M. SMITH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."