W. O. WILLE.

TOOL HOLDER.

APPLICATION FILED FEB. 24, 1919.

1,319,443. Patented Oct. 21, 1919.

Fig. 5.

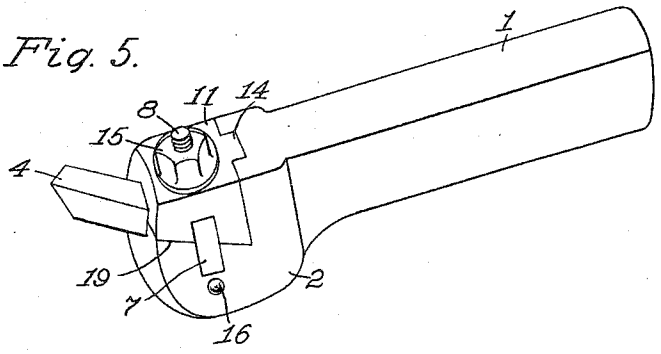


Fig. 3.

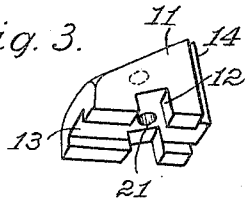


Fig. 4.

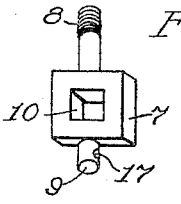


Fig. 2.

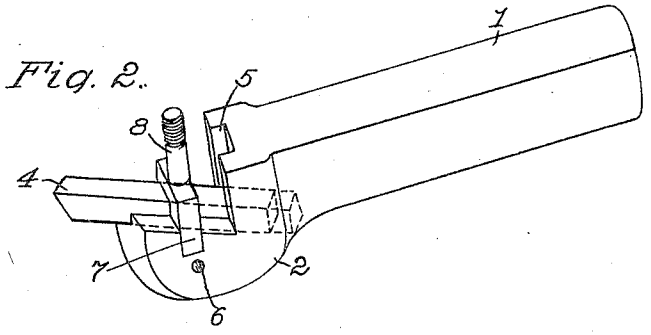
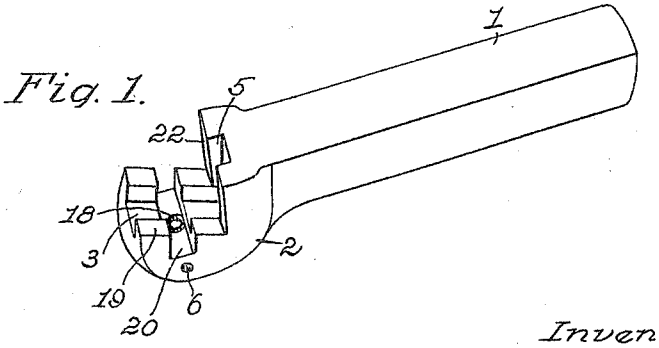


Fig. 1.



Inventor,
Walter O. Wille. by
G. B. Kennedy.
Attorney.

UNITED STATES PATENT OFFICE.

WALTER O. WILLE, OF WATERLOO, IOWA.

TOOL-HOLDER.

1,319,443. Specification of Letters Patent. Patented Oct. 21, 1919.

Application filed February 24, 1919. Serial No. 278,803.

To all whom it may concern:

Be it known that I, WALTER O. WILLE, a citizen of the United States of America, and a resident of Waterloo, Blackhawk county, Iowa, have invented certain new and useful Improvements in Tool-Holders, of which the following is a specification.

My invention relates to improvements in tool-holders, and the object of my improvement is to furnish a sectional holding device for a lathe tool or the like, which will adjustingly, yet securely and fixedly, mount and secure such a tool in the device without liability to displacement under the stresses incident to service.

This object I have accomplished by the means which are hereinafter described and claimed, and which are illustrated in the accompanying drawings, in which Figure 1 is a perspective view of the integral shank and head parts of the tool; Fig. 2 is a perspective view of said shank and head with a tool and the orificed receiving body therefor as assembled; Fig. 3 is a perspective view of the clamping element; Fig. 4 is a perspective view of said orificed receiving body, and Fig. 5 is a perspective view of the completely assembled device, with a tool mounted therein.

Similar numerals of reference denote corresponding parts throughout the several views.

In my device, the numeral 1 denotes an elongated shank having a transversely enlarged head 2 whose upper forward part is provided with an acutely angled transverse notch 19, the rear upright wall of said notch furnishing the transverse shoulder 22 which has a medial vertically disposed rectangular groove 5. Said head 2 has a medial longitudinal rectangular groove and channel 3 opening upwardly in its groove part in the horizontally disposed wall of the notch 19. The head is also medially transversely grooved at 20, the groove 20 traversing said groove 3 and being of somewhat greater depth. A cylindrical socket 18 is formed in the middle of said groove 20, and the head 2 has a transverse cylindrical orifice 6 traversing said socket.

The numeral 7 denotes a rectangular body adapted to fit partially within said transverse groove 20 of the head 2, and has a depending cylindrical stud 9 which latter is seated in the socket 18, said stud having a transverse orifice 17 alined with the orifice 6. The body 7 has a rectangular central orifice 10 alined with the groove and channel 3, and also has an upwardly directed threaded stud 8.

The numeral 11 denotes a clamping element or block having a rear upright medial rib 14 to fit the upright groove 5 in the head 2, the said block being formed to fit the acute angled notch 19. The block 11 has in its lower face a medial rectangular longitudinal groove 13 registering with the upwardly opening groove part 3 of said head to form therewith the forward part or continuation of the longitudinal channel 3. This channel 3 may be obliquely directed, as shown, or otherwise positioned as desired. The block 3 also has in its lower face, a transverse groove 12 adapted to fit over the upper part of the rectangular body 7, and also has an upwardly directed cylindrical opening 21 through which the stud 8 is passed to have its upper threaded end projecting upwardly from said block to receive the integrally combined fastening nut and washer 15. The tool 4 is mounted in the channel 3, also traversing the alined opening 10 in said body 7, the clamping element or block 11 being seated upon said body and said tool and adjustingly clamped thereto by means of the washer nut 15. The body 7 is secured in its seat by means of a pin or rivet 16 traversing the alined orifices 6 and 17, respectively, in the head 2 and stud 9.

The tool 4 is, by said means, securely locked and fixedly held in the device adjustably, and cannot be displaced therefrom by the usual stresses incident to its use. The holding means are such that the tool 4 can be easily adjusted in its seat, and can be used until worn to a minimum length.

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

1. In a tool-holder, the combination of a shank having a head provided with a notch supplying a transverse shoulder, and having a longitudinal channel, an orificed body mounted in said notch with its orifice alined with said opening, said orifice and opening providing a tool-seat, a clamping-element mounted upon said body and engaging the shoulder of said head, and means for releasably securing said elements together to hold a tool fixedly in said tool-seat.

2. In a tool-holder, the combination of a shank having a transversely notched and

grooved and longitudinally channeled head, an orificed body mounted in the transverse groove of said head with its orifice alined with said channel to furnish a tool-seat, a clamping-element mounted upon said body and head in said transverse notch, and means for releasably securing said elements together to hold a tool fixedly adjustably in said tool-seat.

3. In a tool-holder, the combination of a shank having a transversely notched and grooved and longitudinally channeled head, an orificed body mounted in the transverse groove of said head with its orifice alined with said channel to furnish a tool-seat, a clamping-element transversely and longitudinally grooved to receive respectively parts of said body and a tool in said tool-seat, and means for securing said element, body and head together.

4. In a tool-holder, the combination of a shank having a transversely notched and grooved and longitudinally channeled head, an orificed body mounted in the transverse groove of said head with its orifice alined with said channel to furnish a tool-seat, a clamping-element mounted in and engaging the said notch and also said orificed body, means for detachably fastening said element compressibly upon said head and orificed body, and other means for securing said body to said head.

5. In a tool-holder, the combination of a shank having a transversely notched and grooved and longitudinally channeled head, the notch forming a transverse shoulder having a medial vertical groove, an orificed body mounted in the transverse groove of said head with its orifice alined with said channel to furnish a tool-seat, a clamping-element mounted in said notch and having a vertical rib fitting the vertical groove formed in said shoulder, and means for fastening said element adjustably upon said orificed body and head and upon a tool mounted in the tool-seat.

6. In a tool-holder, in combination, a shank having a terminal head provided with a recessed seat for a tool, a clamping element, a tool-receiving body orificed to receive said tool, and means for securing and engaging said clamping element upon and with said orificed body and tool to fixedly clamp the tool to said shank.

Signed at Waterloo, Iowa, this 5th day of Feb. 1919.

WALTER O. WILLE.

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