No. 663,005. Patented Dec. 4, 1900.

C. BOLTSHAUSER-SCHMID.

HOLDER FOR TURNING AND BORING TOOLS.

(Application filed June 23, 1900.)

(No Model.)

Fig. 1

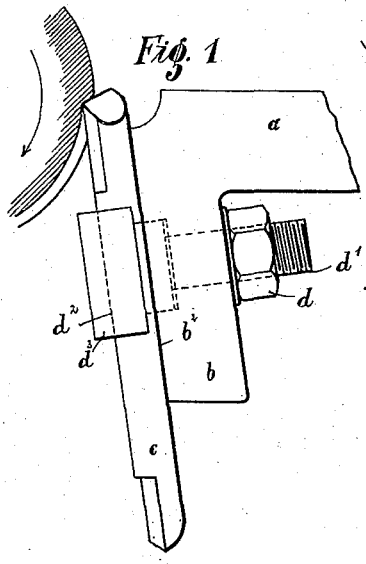


Fig. 3

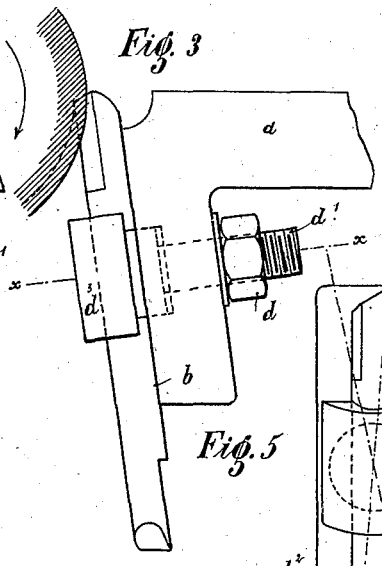


Fig. 5

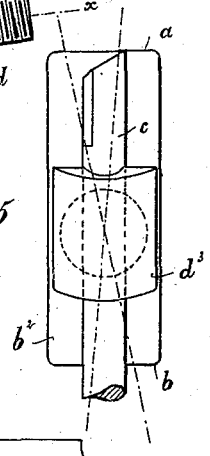


Fig. 2

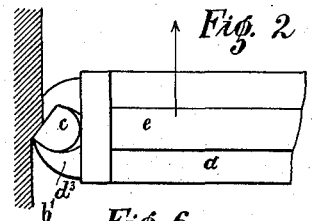


Fig. 4

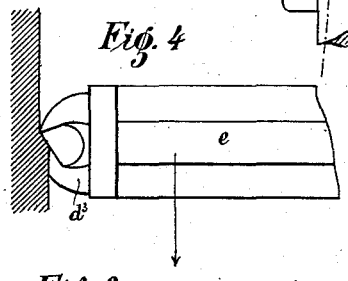


Fig. 6

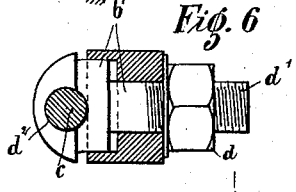


Fig. 8

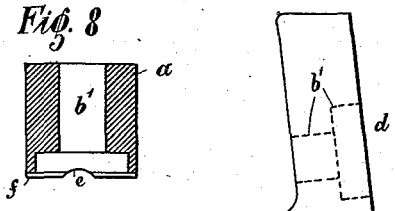
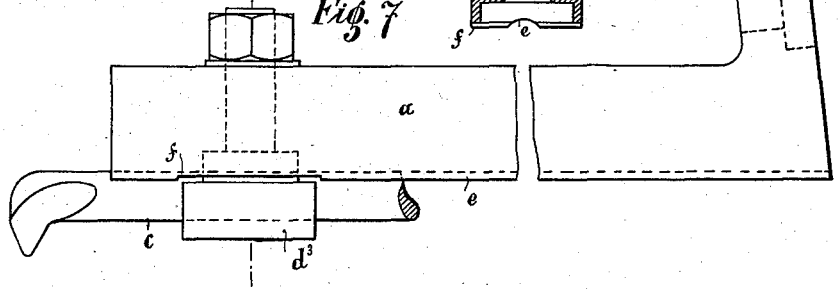


Fig. 7



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UNITED STATES PATENT OFFICE.

CONRAD BOLTSHAUSER-SCHMID, OF ZURICH, SWITZERLAND, ASSIGNOR TO S. STEINER & CO., OF SAME PLACE.

HOLDER FOR TURNING AND BORING TOOLS.

SPECIFICATION forming part of Letters Patent No. 663,005, dated December 4, 1900.

Application filed June 23, 1900. Serial No. 21,353. (No model.)

To all whom it may concern:

Be it known that I, CONRAD BOLTSHAUSER-SCHMID, mechanician, a citizen of Switzerland, residing at Zurich, in the canton of Zurich and Republic of Switzerland, (whose post-office address is Limmatstrasse 125,) have invented certain new and useful Improvements in Holders for Turning and Boring Tools; and I do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, which form a part of this specification.

I have applied for patents in the following countries: Switzerland on December 4, 1899, (granted under No. 18,862;) Austria on December 14, 1899; Germany on January 10, 1900; Hungary on April 23, 1900; France on June 1, 1900; Italy on June 2, 1900; Belgium on June 2, 1900, and Great Britain on June 2, 1900.

The object of the present invention is a holder for turning and boring tools which enables the tool to be fixed at any angle desired both for right and left hand turning, as also for cutting screw-threads, and which is adapted to be employed for external as well as for internal work.

Figures 1 and 2 show the front part of the tool-holder in elevation and plan, respectively, holding a right-hand tool. Figs. 3 and 4 show the same in elevation and plan, respectively, holding a left-hand tool. Fig. 5 is a front view of the tool-holder. Fig. 6 is a section of the same on the line $x\ x$ of Fig. 3, and Figs. 7 and 8 are respectively a plan view and a section on the line $y\ y$ of Fig. 7 of the tool-holder in its application to internal work.

An elbow-shaft $a\ b$ is designed to have its longer arm a secured in a suitable manner to the tool holder or rest. (Not shown.) The shorter arm b has an opening b', the forward portion of which is rabbeted or enlarged. A bolt d' is located in the opening b', having an enlarged head corresponding with the rabbeted portion of the opening and having a sleeve d^3, provided with an opening d^2, in which the cutting-tool is inserted. A nut d on the end of the bolt d' serves to cause the bolt and sleeve to clamp the two firmly against the face of the arm b.

By the construction shown the tool may be easily adjusted to the desired angle, as indicated in Fig. 5.

Supports such as were hitherto necessary for raising the tool up to the center of revolution of the lathe-shaft are entirely obviated by the use of this tool-holder, as the tool can easily be brought to the requisite height by adjusting it in the sleeve d^3.

In order to exchange the tool c when, for instance, the direction of rotation is altered, the holder need not be unscrewed, but merely the nut d be loosened and the tool taken out of the sleeve d^3 and replaced by another. By the employment of a tool c with cutting edges at each end it is only necessary to reverse the sleeve d^3 to adjust the tool at the proper height and angle and screw up the nut d, whereupon the lathe can continue working.

The horizontal arm a of the shaft $a\ b$ is provided with a longitudinal groove e, which enables the drilling-tool for interior working to be secured so that it cannot be displaced. (See Figs. 7 and 8.) In order to press the drilling-tool securely on the arm a, a niche f is provided therein for the sleeve d^3, which moves from the arm b to the arm a.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. A reversible elbow-shaped tool-holder for lathes having a long and a short arm each adapted for attachment to a tool-rest, and means for clamping a cutting-tool against either arm in varying positions, substantially as described.

2. A reversible elbow-shaped tool-holder for lathes having a long and a short arm each adapted for attachment to a tool-rest, and means for clamping a cutting-tool against either arm, and in varying inclined positions against the short arm, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

CONRAD BOLTSHAUSER-SCHMID.

Witnesses:

HERMANN HUBER,

A. LIEBERKNECHT.