

No. 687,645.

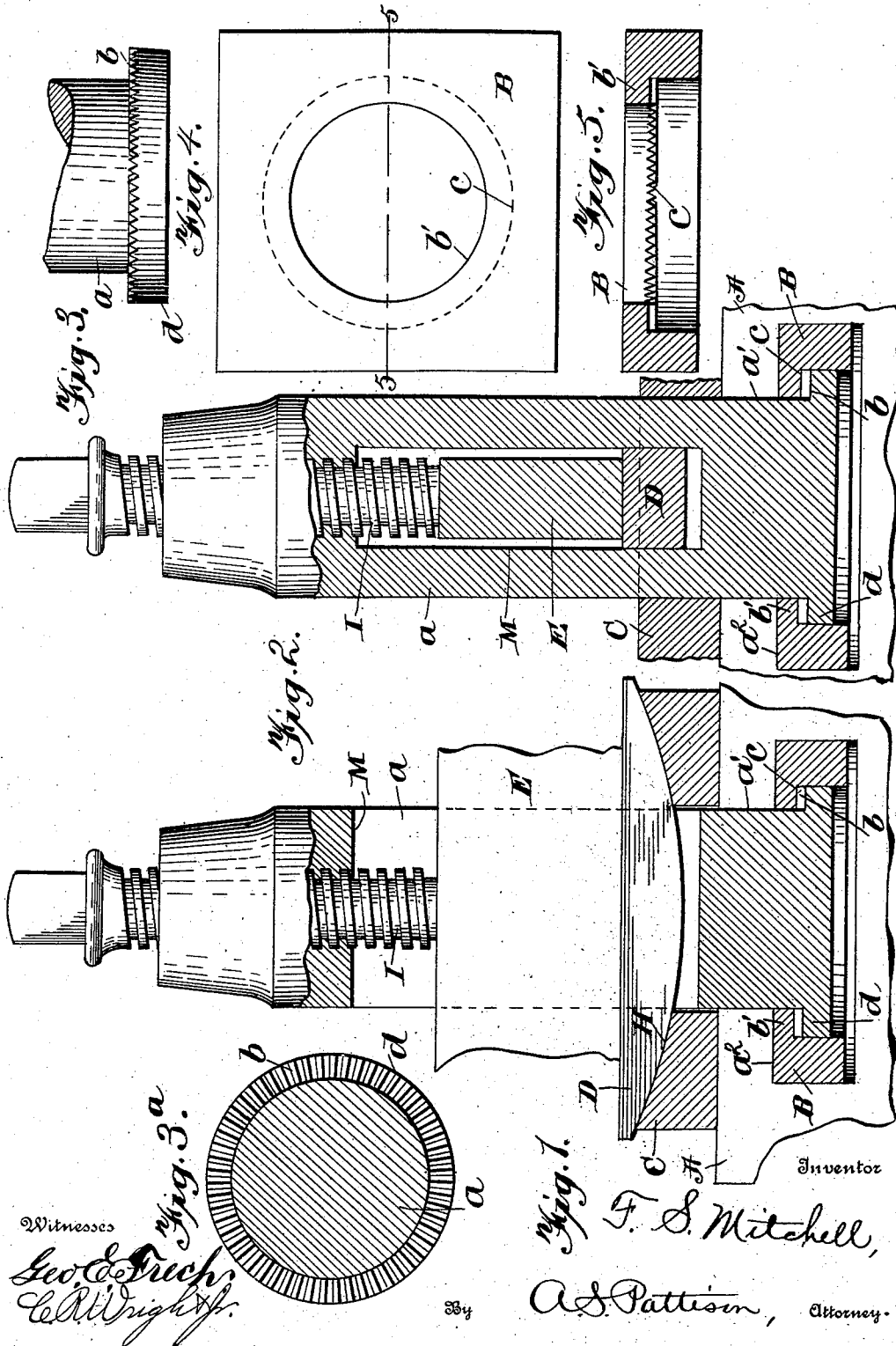
Patented Nov. 26, 1901.

F. S. MITCHELL.

TOOL HOLDER.

(Application filed July 12, 1901.)

(No Model.)



Witnesses
Geo. C. Frick,
Chas. W. Wright.

Fig. 1.
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UNITED STATES PATENT OFFICE.

FRANK S. MITCHELL, OF WHEELING, WEST VIRGINIA, ASSIGNOR OF ONE-HALF TO CHARLES E. BLUE, OF WHEELING, WEST VIRGINIA.

TOOL-HOLDER.

SPECIFICATION forming part of Letters Patent No. 687,645, dated November 26, 1901.

Application filed July 12, 1901. Serial No. 68,082. (No model.)

To all whom it may concern:

Be it known that I, FRANK S. MITCHELL, a citizen of the United States, residing at Wheeling, in the county of Ohio and State of West Virginia, have invented new and useful Improvements in Tool-Holders, of which the following is a specification.

My invention relates to improvements in tool-holders which are for use in connection with lathes, and particularly pertains to means for preventing the tool-holder from rotating when the tool is clamped therein for operation.

In the accompanying drawings, Figure 1 is a vertical central sectional view of a tool-holder embodying my invention. Fig. 2 is an elevation of the same, taken at right angles to Fig. 1. Fig. 3 is a detached view of the lower end of the tool-holder. Fig. 3^a is a top plan view of the tool-holder. Fig. 4 is a top plan view of the coacting locking member for the tool-holder. Fig. 5 is a sectional view on the line 5 5 of Fig. 4.

Though the specific construction employed to carry out this invention may vary without departing from the spirit and scope of my invention, I here show one way of preventing the rotation of the tool-holder when the tool is clamped therein for use.

Referring now to the accompanying drawings, A is the tool-rest, and *a* the tool-post. The tool-rest A is provided with the vertically-arranged opening *a'*, through which the lower end of the tool-post *a* extends. The lower end of this opening *a'* is enlarged laterally, as shown at *a''*, and preferably contains a coacting locking block or member B. This member B, as shown in Fig. 4, is angular, and the enlarged portion *a''* is made to correspond with the member or block B and is adapted to hold it against rotation in respect to the tool-rest A.

The lower extremity of the tool-post *a* is provided with a laterally-projecting flange *d*, which is provided with a plurality of locking shoulders or serrations *b*, with which corresponding locking shoulders or serrations *c*, formed upon an inwardly-extending flange *b'* of the locking-block B, engage and by means of which when the locking-shoulders are in engagement the tool-post *a* is held against rotary movement when in use.

A vertically-arranged slot M is made in the tool-post and is adapted to receive the tool E. Surrounding the lower portion of the tool-post and resting upon the tool-rest A is a suitable block or member C, and this block or member C is provided in its upper face with a concaved recess H, in which rests the member D, having its lower face convexed to correspond with the concaved recess H and to support the tool E. Passing through the upper end of the tool-post *a* is the tool-clamping screw I, by means of which the tool is clamped and held when being used.

The tool-post *a* has a vertical movement in respect to the tool-rest, and it is this vertical movement under the clamping action of the screw I that causes the locking shoulders or serrations *b* and *c* to engage.

When the tool is placed in position within the tool-post *a* and the tool-holder turned to the desired position for holding the tool as desired by the operator, the clamping of the tool through the medium of the clamping-screw I elevates the tool-post *a* and causes, as just stated, the engagement of the locking-shoulders upon the lower end of the tool-post and the coacting locking member B.

Though I have described the use of the locking member B and a specific construction whereby the clamping of the tool will automatically lock the tool-post against rotation, this species may be varied without departing from my invention.

Having thus explained the nature of my invention and described one way of constructing and using the same, but without attempting to set forth all the forms in which it may be made or used, what I claim, and desire to secure by Letters Patent, is—

1. A tool-holder comprising a tool-support having a tool-post-receiving opening, a tool-post having a movable head located in said opening, the head and the wall of the opening having interlocking members to prevent a rotation of the post, and a clamping member adapted to cause an engagement of said interlocking members.

2. A tool-holder comprising a support having a tool-post-receiving opening with an enlarged lower end, a longitudinally-movable tool-post having an enlarged lower end located in said opening, the adjacent walls of the

opening and the lower end of the post having laterally-arranged locking members, and means for moving the post vertically to cause the engagement of said locking members.

5 3. A tool-holder comprising a support having a tool-post opening, a longitudinally-movable tool-post located therein the post and the wall of the opening having locking members, the post having a longitudinally-arranged
10 tool-receiving slot, a tool therein supported by said support, and a clamp adapted to force the tool against the support and move the post to cause an engagement of said locking members.

15 4. A tool-holder comprising a support having a tool-receiving opening with an overhanging portion provided with locking members, a longitudinally-movable tool-post therein having its lower end enlarged and provided
20 with coacting locking members, and a tool-

clamp adapted to move the post and cause an engagement of said locking members.

5. A tool-holder comprising a support having a tool-post opening with an enlarged lower end, a locking member located in said enlarged end and held against rotation therein, 25 said locking member having a tool-post opening, a longitudinally-movable tool-post located therein, the post and locking member having coacting locking-serrations, and a tool- 30 clamp adapted to move the post and cause an engagement of said locking-serrations.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

F. S. MITCHELL.

Witnesses:

M. V. BLUE,

W. V. HOGE, Jr.