

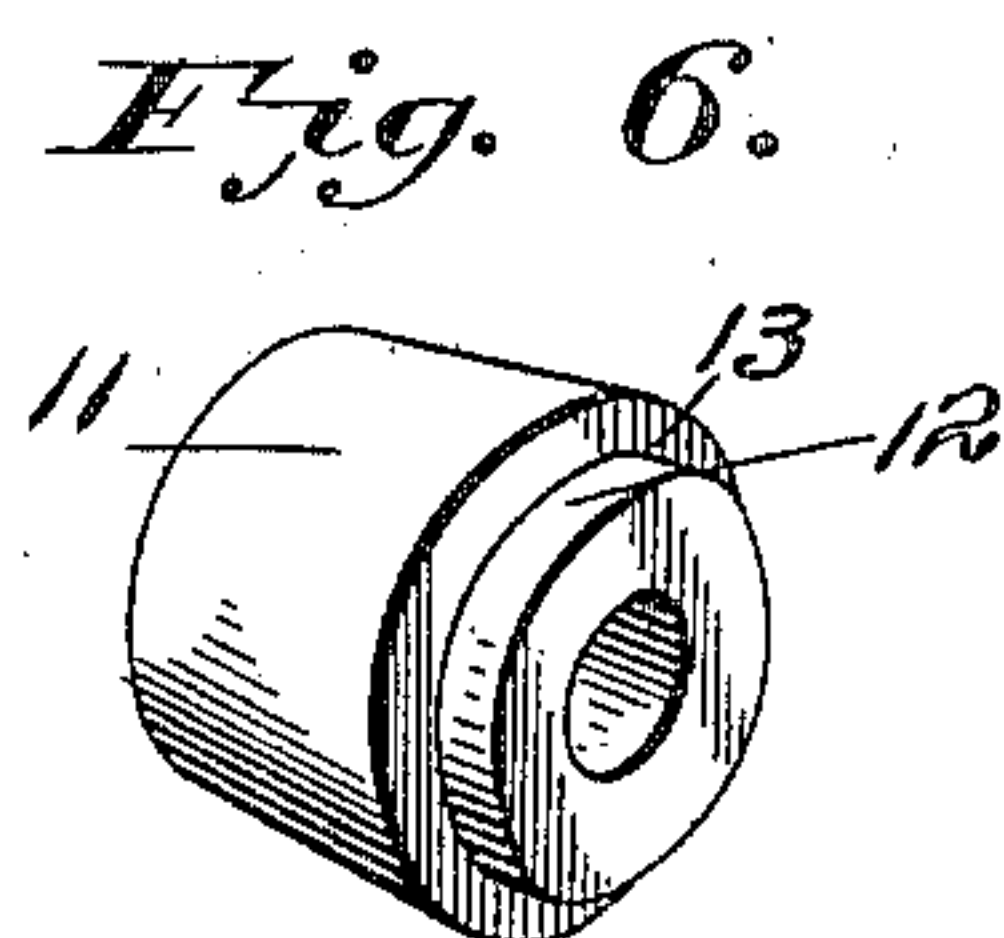
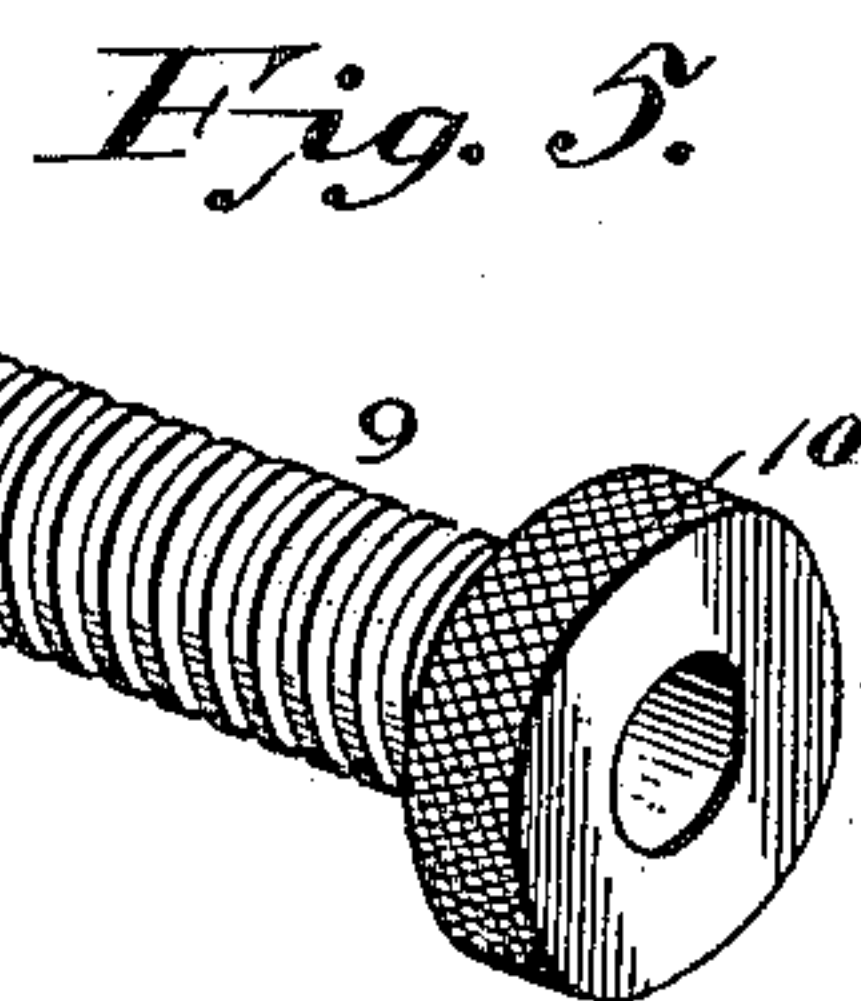
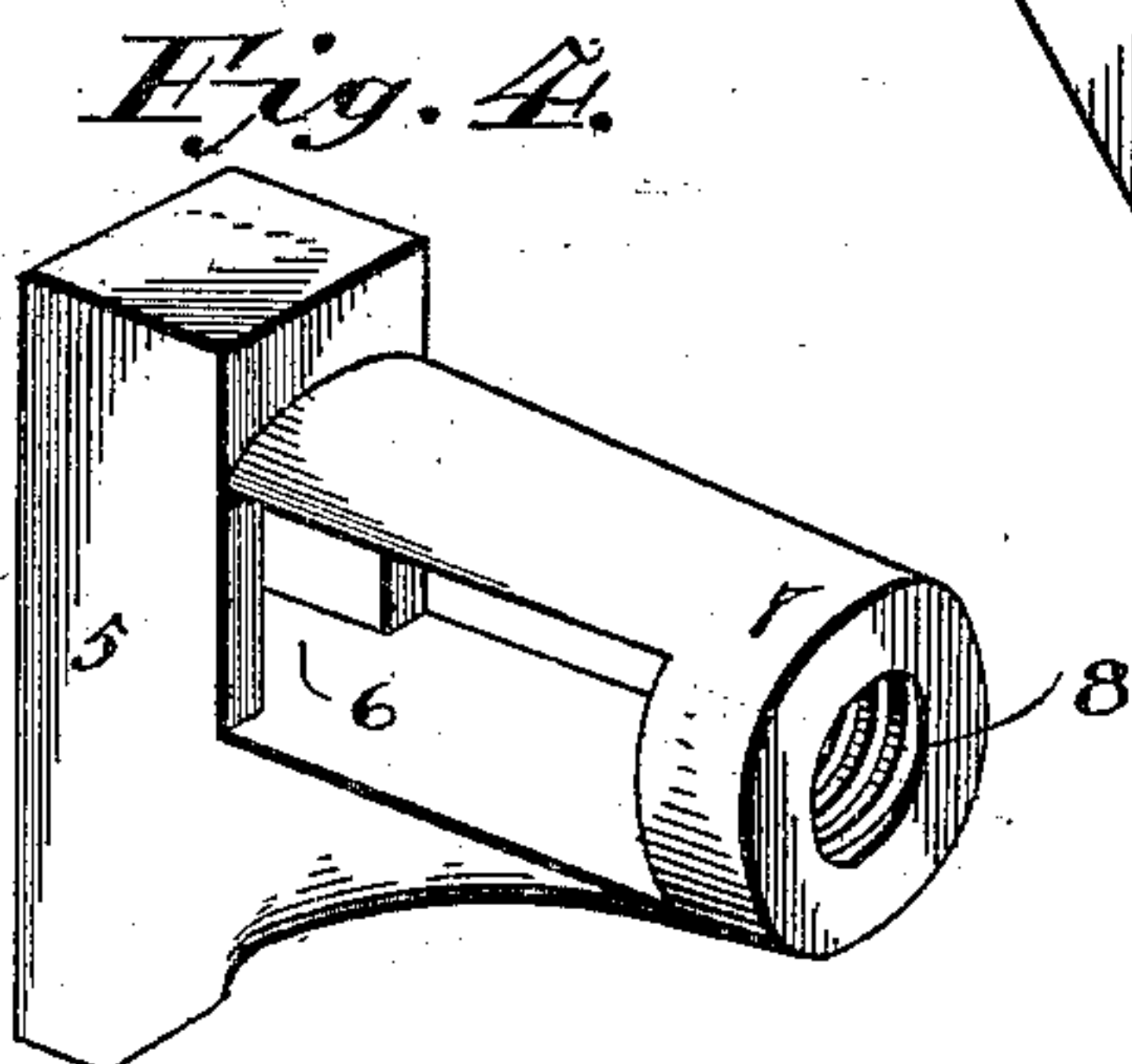
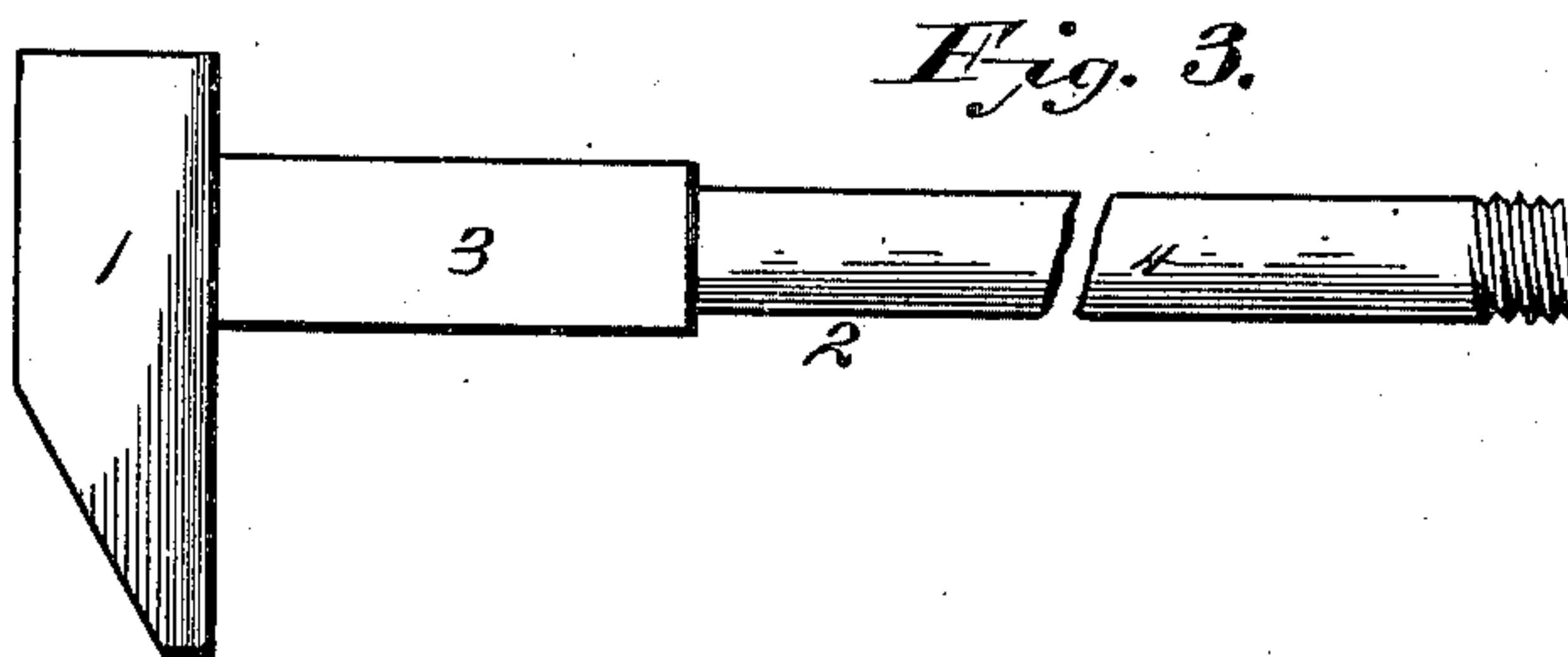
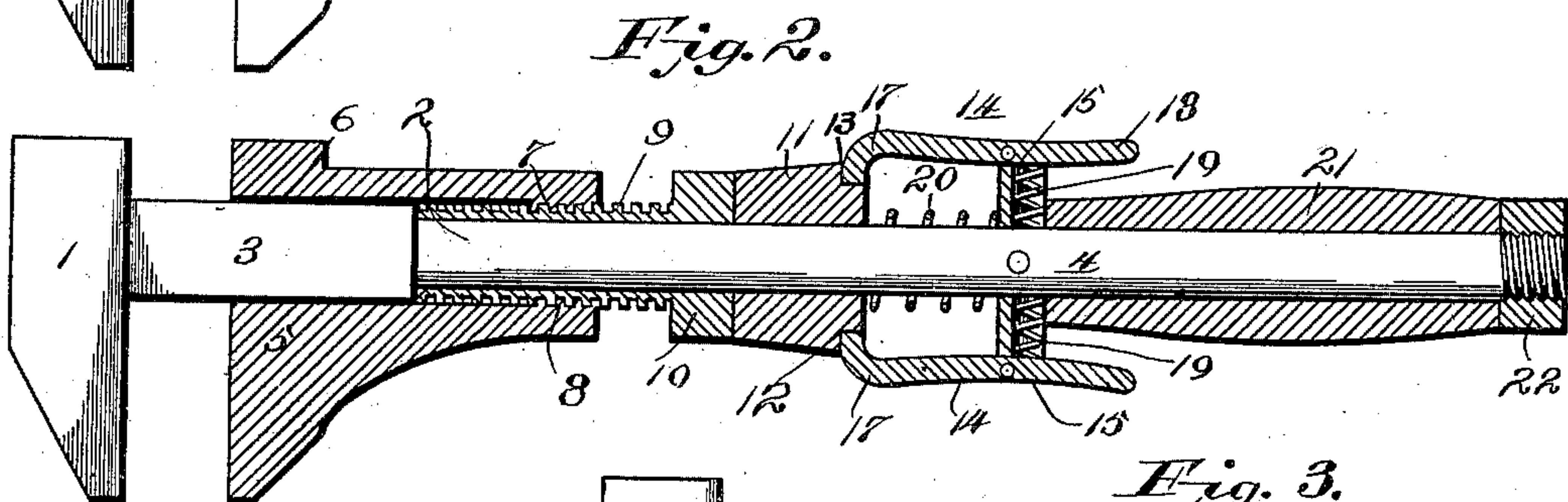
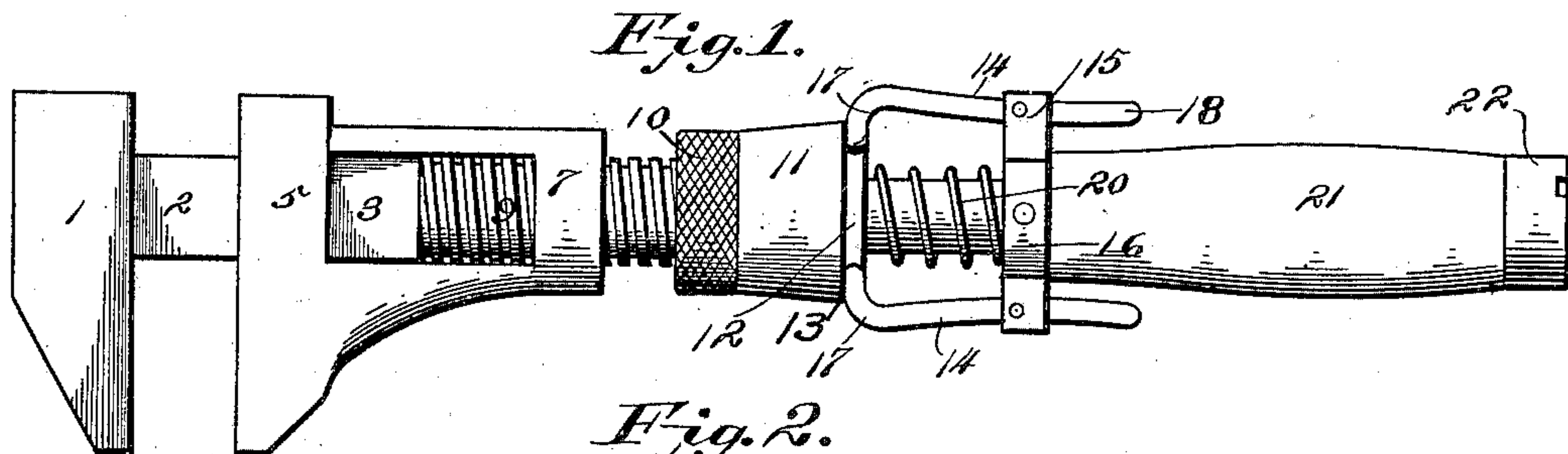
No. 622,471.

Patented Apr. 4, 1899.

F. S. HOLLWECK.
WRENCH.

(Application filed May 14, 1898.)

(No Model.)



Witnesses,
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UNITED STATES PATENT OFFICE.

FRANK S. HOLLWECK, OF PHILADELPHIA, PENNSYLVANIA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 622,471, dated April 4, 1899.

Application filed May 14, 1898. Serial No. 680,663. (No model.)

To all whom it may concern:

Be it known that I, FRANK S. HOLLWECK, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Wrenches; 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.

With the ordinary form of monkey-wrench wherein a sliding jaw is employed in connection with a stationary jaw it has been found that in operating upon nuts in comparatively inaccessible places where only a partial turn of the wrench can be made it is necessary to remove the wrench entirely from the nut for each movement which is given to the nut. In order to overcome this objection, I have provided a wrench wherein a slight longitudinal movement of the movable jaw is permissible against the pressure of a spring, which will enable the wrench to be turned back on the nut, doing away with the necessity of removing it entirely therefrom. Suitable means are also provided for holding the movable jaw in its locked or adjusted position when it is desired to screw up the nut.

The construction and method of operation of my wrench will be fully set forth in the following description, taken in connection with the accompanying drawings, in which—

Figure 1 represents a side elevation of a wrench constructed in accordance with my invention. Fig. 2 is a central longitudinal section through the same. Fig. 3 is a detail view of the stationary jaw and the shank upon which it is formed. Figs. 4, 5, and 6 are similar views, respectively, of the movable jaw, the adjustment-sleeve for the movable jaw, and the collar by means of which the movable jaw is held in its adjusted position.

Like reference-numerals indicate like parts in the different views.

The stationary jaw 1 is formed upon one end of the shank 2, the latter having a rectangular portion 3 and a cylindrical portion 4, as clearly shown. The movable jaw 5 is formed with a longitudinal opening 6 therein, which is rectangular in cross-section and of a size to permit of the movement of said jaw on

the rectangular portion 3 of the shank 2. Said movable jaw is also provided with what may be termed a "shank" 7, through which extends a longitudinal internally-threaded opening 8. Loosely mounted on the cylindrical portion 4 of the shank 2 is an adjustment-sleeve 9, provided with external screw-threads which mesh with the internal screw-threads in the opening 8, and is provided with a knurled or milled projection or finger-engaging portion 10. Also loosely mounted on the cylindrical portion 4 of the shank 3 and located below the adjustment-sleeve 9 is a collar 11, cut away at its lower end peripherally, as shown at 12, forming an annular shoulder 13. Said shoulder is adapted to be engaged by inwardly-spring-pressed levers 14, 14, which constitute detents, the same being located upon opposite sides of the cylindrical portion 4 of the shank 2 and fulcrumed in lugs 15 upon a collar 16, secured to the cylindrical portion of said shank. The upper ends of said levers are formed with lateral projections 17, whose inner surfaces are curved to conform to the shape of the collar 11, and the opposite ends of said levers are extended beyond the point of pivotal connection with the lugs 15, forming handles 18. The lateral extensions 17 on said levers form the engaging portions thereof, the same being held inwardly by means of coiled springs 19, which fit within sockets in the collar 16 just in the rear of the pivotal points of said levers with the lugs 15 on said collar. The collar 11, the adjustment-sleeve 9, and the movable jaw 5 are all held normally in their upward positions by means of a coiled spring 20, which surrounds the cylindrical portion 4 of the shank 2 and engages the upper surface of the collar 16 and the lower end of the collar 11. Below the collar 16 is the handle 21 of the wrench, which is held in place by means of a nut 22, which engages the threaded end of the cylindrical portion 4 of the shank.

From the foregoing description it will be seen that the movable jaw 5 may be adjusted to or from the stationary jaw 1 by means of the adjustment-sleeve 9, which operates in an old and well-known manner. During the adjustment of the movable jaw the collar 11 is held against longitudinal movement by reason of the engagement of the lateral ex-

tensions 17 on the levers 14 with the annular shoulder 13 on the sleeve 11. When the nut upon which the wrench is operating has been turned until the wrench meets with an obstruction which prevents further movement thereof, the handles 18 of the levers 14 are pressed inwardly, this action releasing the engaging portions 17 of said levers from the annular shoulder 13 on the collar 11 and permitting the rearward longitudinal movement of the movable jaw 5, the sleeve 8, and the collar 10, carried thereby, so as to permit the rearward movement of the wrench on the nut without the necessity of disengaging the wrench therefrom. As soon as the parallel side portions of the nut are reached by the jaws 1 and 5 of the wrench the spring 19 forces the movable jaw upwardly and enables the lateral projections 17 of the levers 14 to return to their normal positions in engagement with the shoulder 13. The wrench may then be turned again in a forward direction, tightening the nut still more, and the operation just described repeated until the nut has been seated.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a wrench, a stationary jaw, a movable jaw, adjusting means for the movable jaw loosely mounted on the shank of the stationary jaw and having a threaded connection with the movable jaw, and a detent for locking said adjusting means against rearward movement.

2. In a wrench, a stationary jaw, a movable jaw, an adjustment-sleeve for the movable jaw loosely mounted on the shank of the stationary jaw, and having a threaded connection with the movable jaw, and a detent for locking said sleeve against rearward movement.

3. In a wrench, a stationary jaw, a movable jaw, an adjustment-sleeve for the movable jaw loosely mounted on the shank of the

stationary jaw and having a threaded connection with the movable jaw, a spring for urging said sleeve and said movable jaw toward the stationary jaw, and a detent independent of the movable jaw for holding the latter in its adjusted position.

4. In a wrench, the combination with a stationary jaw, of a movable jaw on the shank of the stationary jaw, an adjustment-sleeve for the movable jaw loosely mounted on the shank of the stationary jaw below the adjustment-sleeve, having a shoulder thereon, a spring for normally urging said collar and the parts connected thereto toward the stationary jaw, and a spring-actuated detent adapted to engage the shoulder on said collar.

5. In a wrench, the combination with a stationary jaw, and the shank thereof upon which the stationary jaw is formed, said shank having a rectangular portion and a cylindrical portion, of a movable jaw having a rectangular opening therein through which the rectangular portion of said shank passes, and a threaded opening in the shank thereof, of an adjustment-screw loosely mounted on the cylindrical portion of the shank of the stationary jaw and provided with external screw-threads adapted to engage the threads in the opening in the shank of the movable jaw, a loosely-mounted collar on the cylindrical portion of the shank of the movable jaw located below said adjustment-sleeve, a spring for normally urging said collar upwardly, and pivotally-mounted levers on the shank of the movable jaw constituting detents whose ends are adapted to engage said collar, as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK S. HOLWECK.

Witnesses:

HENRY FEILING,
JOSEPH FEILING.