

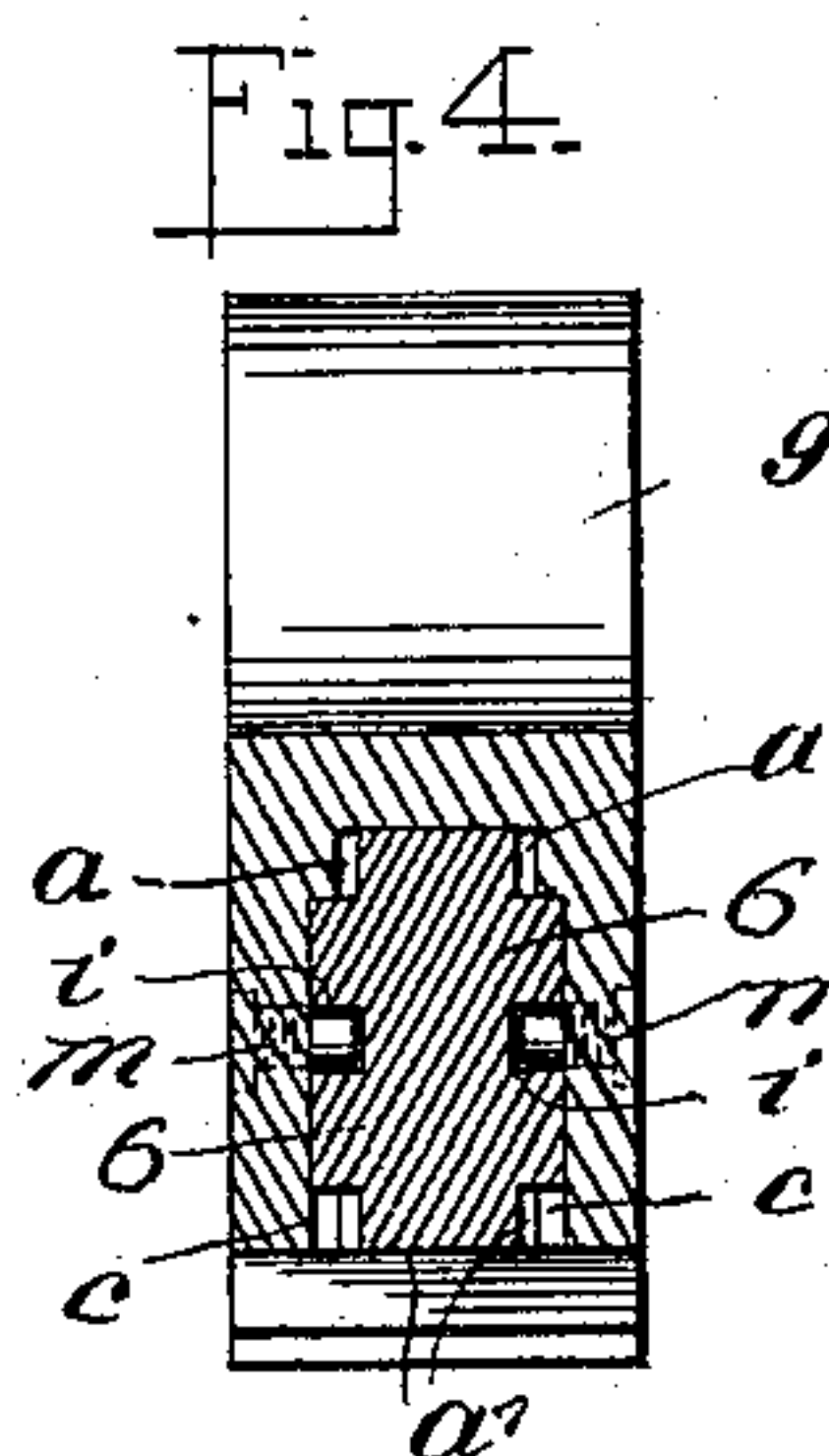
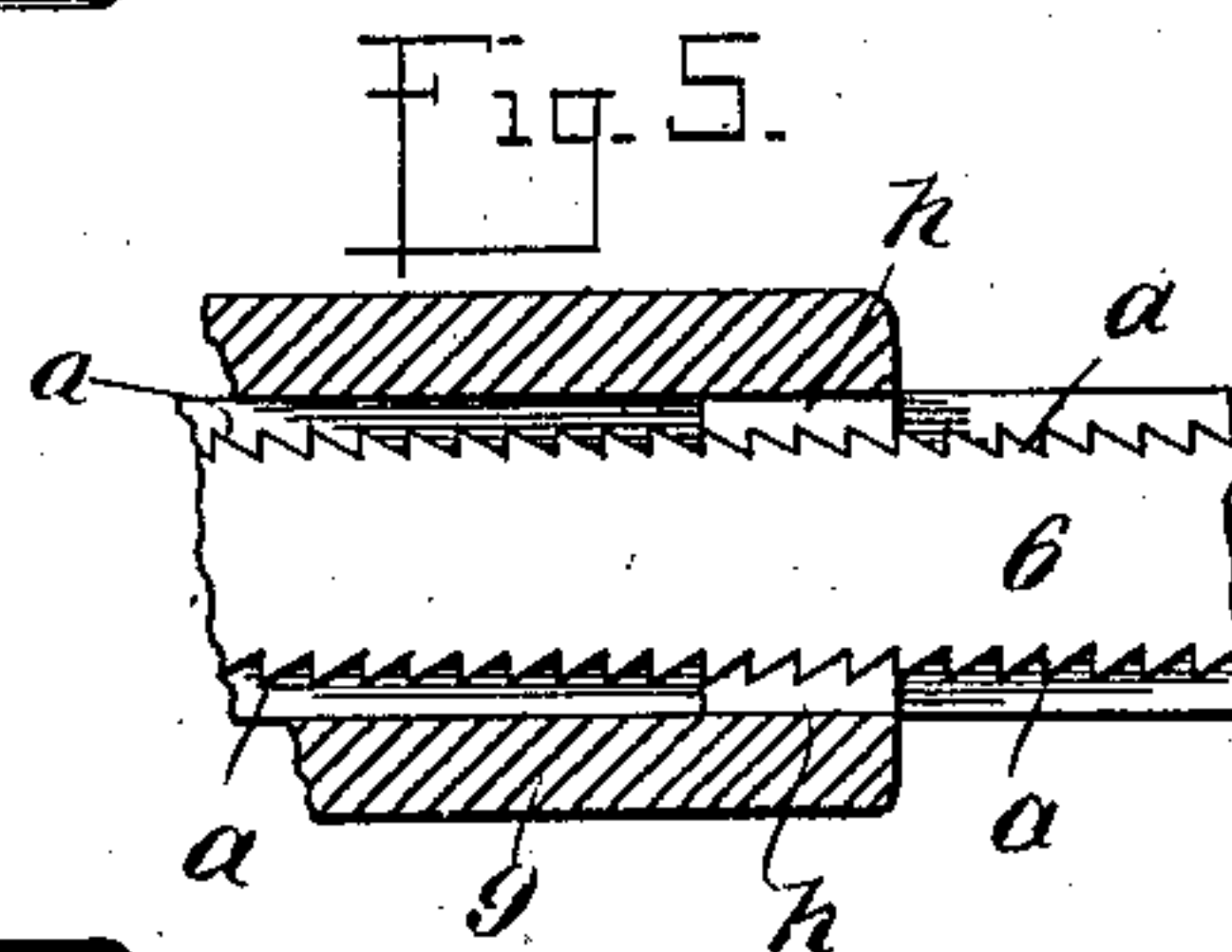
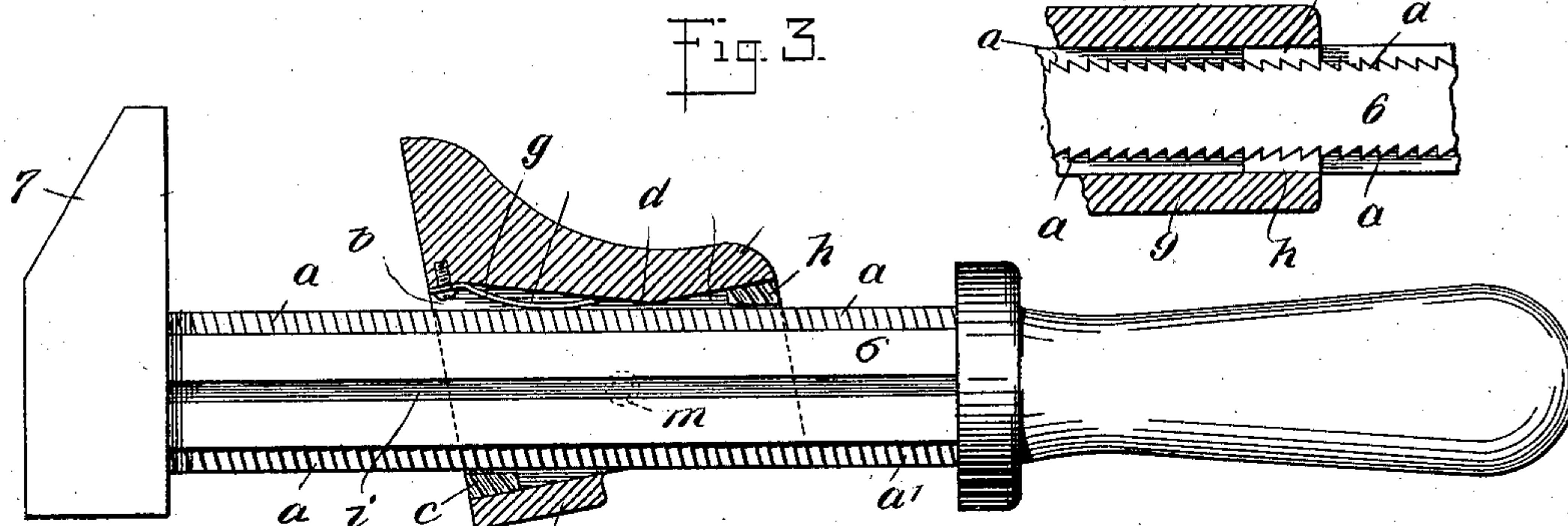
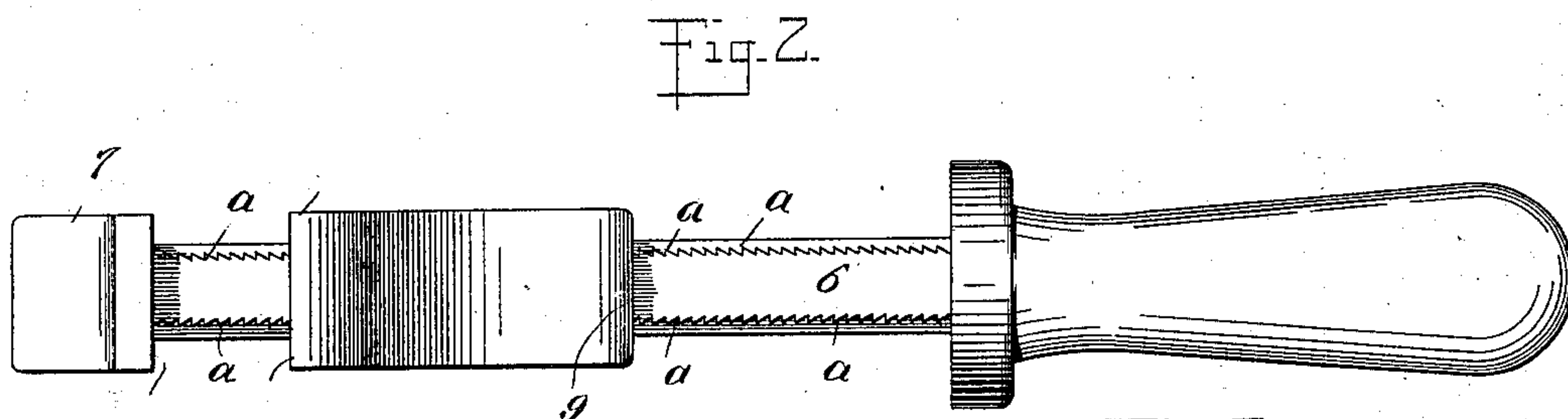
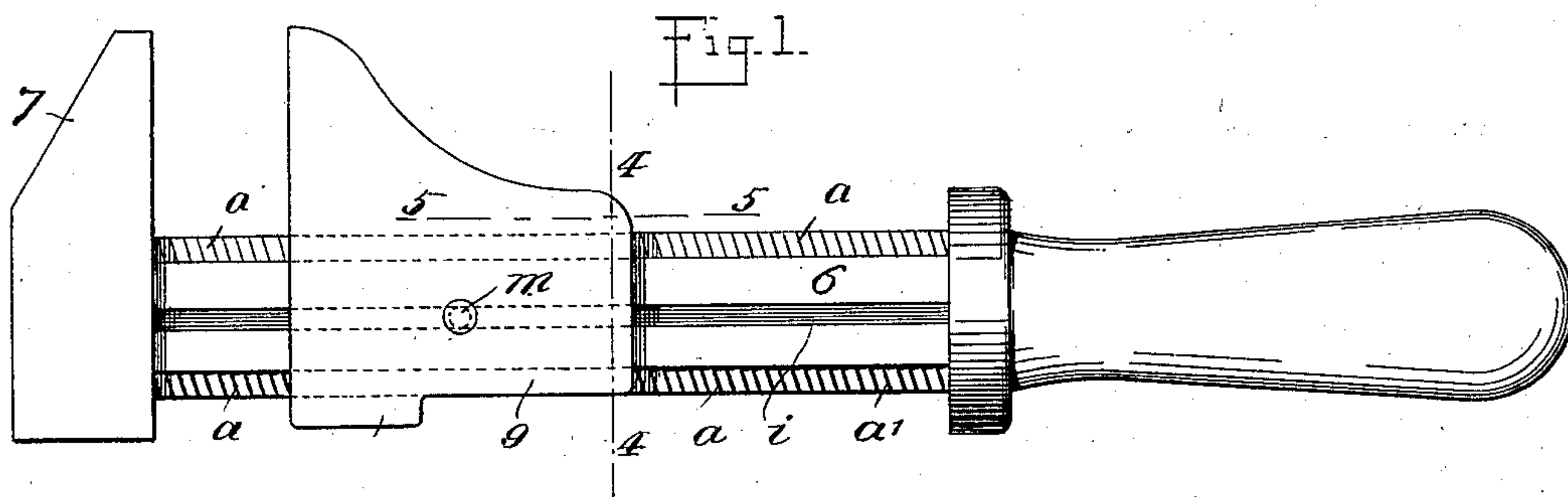
No. 698,288.

Patented Apr. 22, 1902.

L. W. JOHNSON.
WRENCH.

(Application filed May 28, 1901.)

(No Model.)



WITNESSES:

A. Russell Bond.
Wm. L. Patton

INVENTOR

Lafayette W. Johnson

BY

Mum
ATTORNEYS

UNITED STATES PATENT OFFICE.

LAFAYETTE W. JOHNSON, OF JEROME, ARIZONA TERRITORY, ASSIGNOR
TO DAVID CONNOR AND CHAS. E. NATHHORST, OF JEROME, ARIZONA
TERRITORY.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 698,288, dated April 22, 1902.

Application filed May 28, 1901. Serial No. 62,231. (No model.)

To all whom it may concern:

Be it known that I, LAFAYETTE W. JOHNSON, a citizen of the United States, and a resident of Jerome, in the county of Yavapai and Territory of Arizona, have invented a new and Improved Wrench, of which the following is a full, clear, and exact description.

The invention is an improvement in the class of wrenches having a movable jaw which is adapted to slide and rock on the shank of the wrench and provided interiorly with teeth which engage corresponding teeth on the shank for locking the jaw in any desired position.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view of the improved wrench. Fig. 2 is an edge view of the same seen in direction of the arrow *x* in Fig. 1. Fig. 3 is a partly-sectional side view of the wrench, showing the movable jaw rocked into position for slidable adjustment. Fig. 4 is a transverse sectional view substantially on the line 4 4 in Fig. 1; and Fig. 5 is a sectional plan view of details, substantially on the line 5 5 in Fig. 1.

The shank or lever-bar 6 of the wrench is provided with a fixed terminal jaw 7 and a slidable jaw 5. The upper and under portions of the shank 6 are parallel and smooth, and the same are cut away at opposite sides or corners, as shown, and provided at these respective points with teeth *a* and *a'*, which are inclined into the head or jaw 7—that is to say, the teeth *a* incline toward the fixed jaw 7 and the teeth *a'* away from the jaw. The slotted jaw 5 slides on the shank 6 and is provided interiorly, at diagonally opposite points, with teeth *h* and *c*, that are inclined rearward and so formed, respectively, as to adapt them to engage the shank-teeth *a* and *a'*. Thus

the teeth *h* are at the rear end and upper side of the jaw 5, while teeth *c* are at the front end and under side of the same. The jaw 5 is pivoted on the shank 6 by screws *m*, which enter lengthwise grooves or channels *i*. The jaw 5 is thus adapted to rock on the shank 6 and is guided also by the pivots *m*. A pivotal bearing is also formed interiorly at *d*, it being in the nature of a projection or hump that may bear upon the smooth upper side of the shank 6. This projection will serve the same purpose as the pivots *m* in case the latter should be broken or lost.

A curved plate-spring *g* is secured by a screw *b* within the slot of the jaw 5, and its convex under side bears upon the top of the shank 6, thus tending to throw up the front end of the jaw, as in Fig. 1, and hold its teeth *h c* engaged with those *a a'* of the shank.

In other wrenches of this class the shank has been provided with teeth extending across its upper side, whereby the shank was weakened much more than by my arrangement of teeth, for the diameter of the shank was reduced to the extent of the depth of the teeth. Besides this, in my invention the movable jaw has two independent locking points or engagements on each side of the shank, and a smooth surface is provided for the spring to slide upon.

What I claim is—

1. The improved wrench comprising a shank having a fixed jaw, and provided with opposite side channels, and two laterally opposite sets, or rows, of teeth on its upper and under sides, the latter being flat intermediate of such sets of teeth, and the slidable jaw having side pivots, and interior teeth located at diagonally opposite points, and a curved spring arranged within the slot as shown and described.

2. The improved wrench comprising a shank having a fixed jaw, and provided with opposite side channels, and two laterally opposite sets or rows of teeth on its upper and under sides, the latter being flat intermediate of such sets of teeth, and the slidable jaw hav-

ing side pivots and interior teeth located at
diagonally opposite points, and an interior
projection located at about the middle of its
length, which projection is adapted to bear and
5 slide upon the smooth portion of the shank
intermediate of the upper rows of teeth, and
a curved plate-spring arranged as described.

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

LAFAYETTE W. JOHNSON.

Witnesses:

GEO. H. AVERY,

THOS. A. MILLER.