

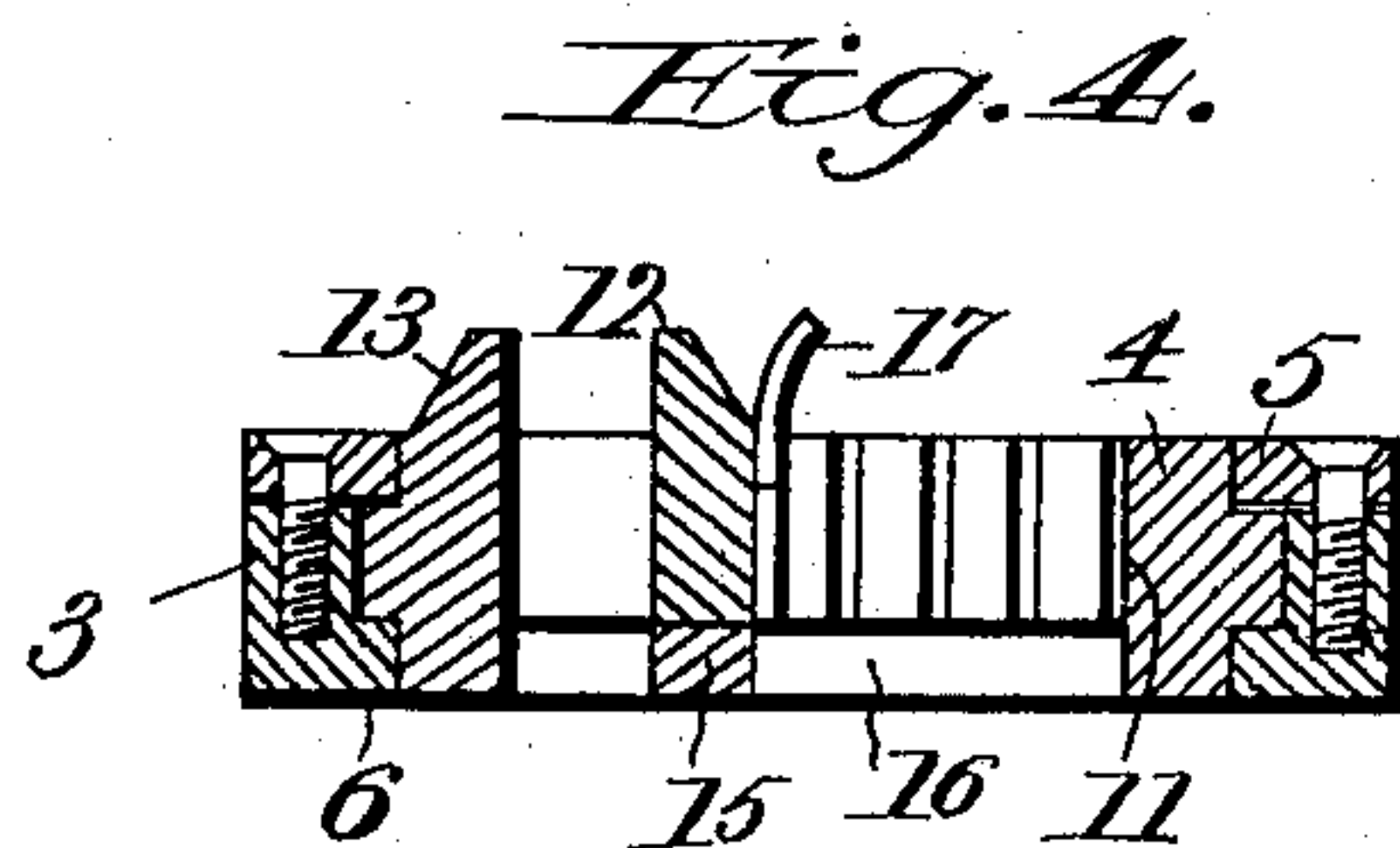
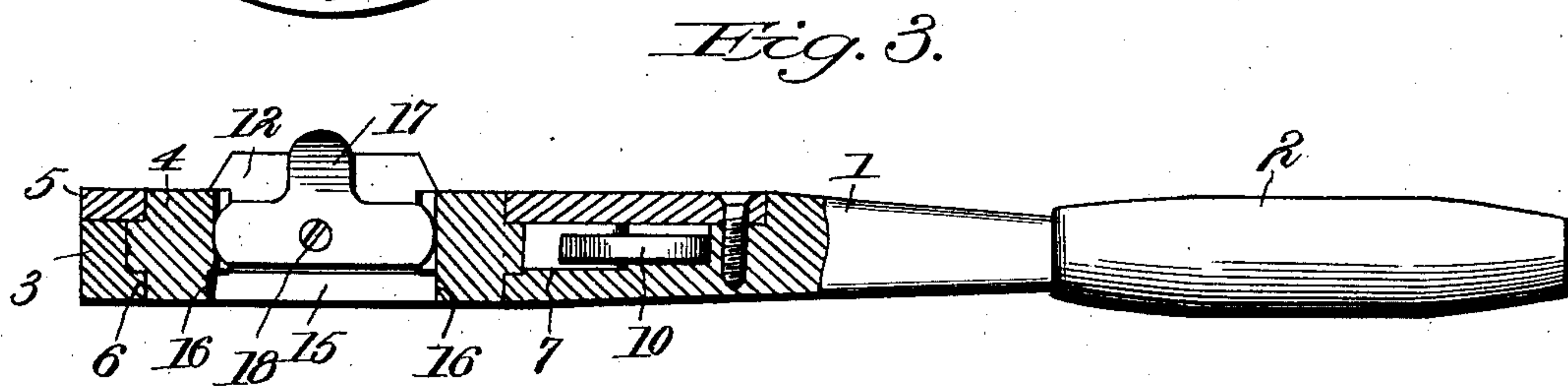
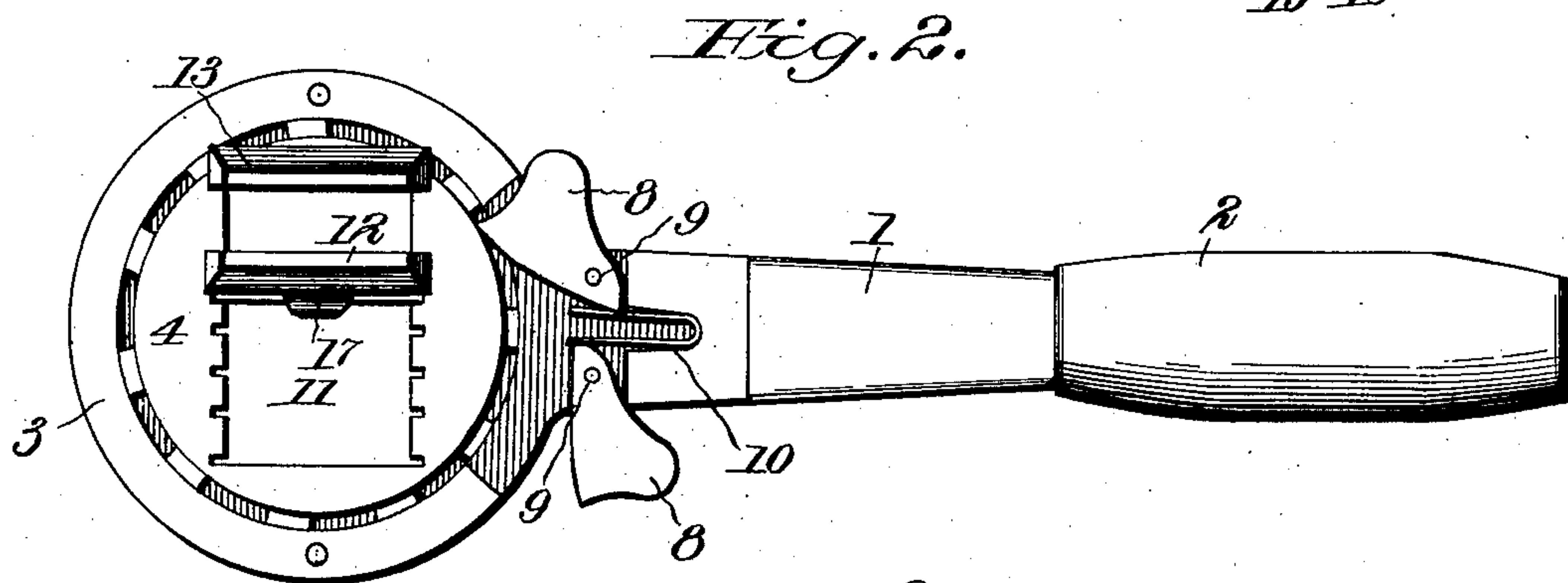
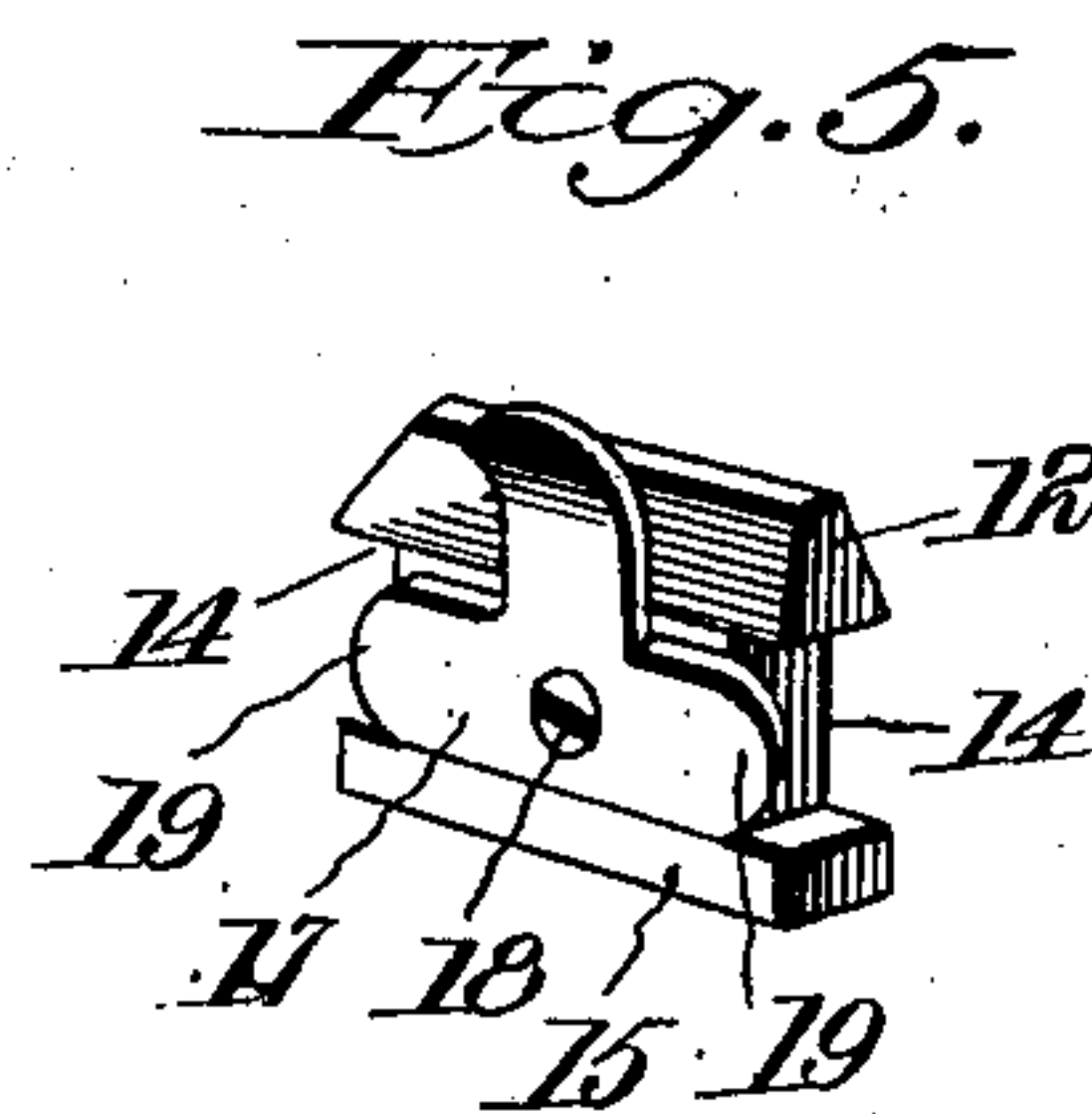
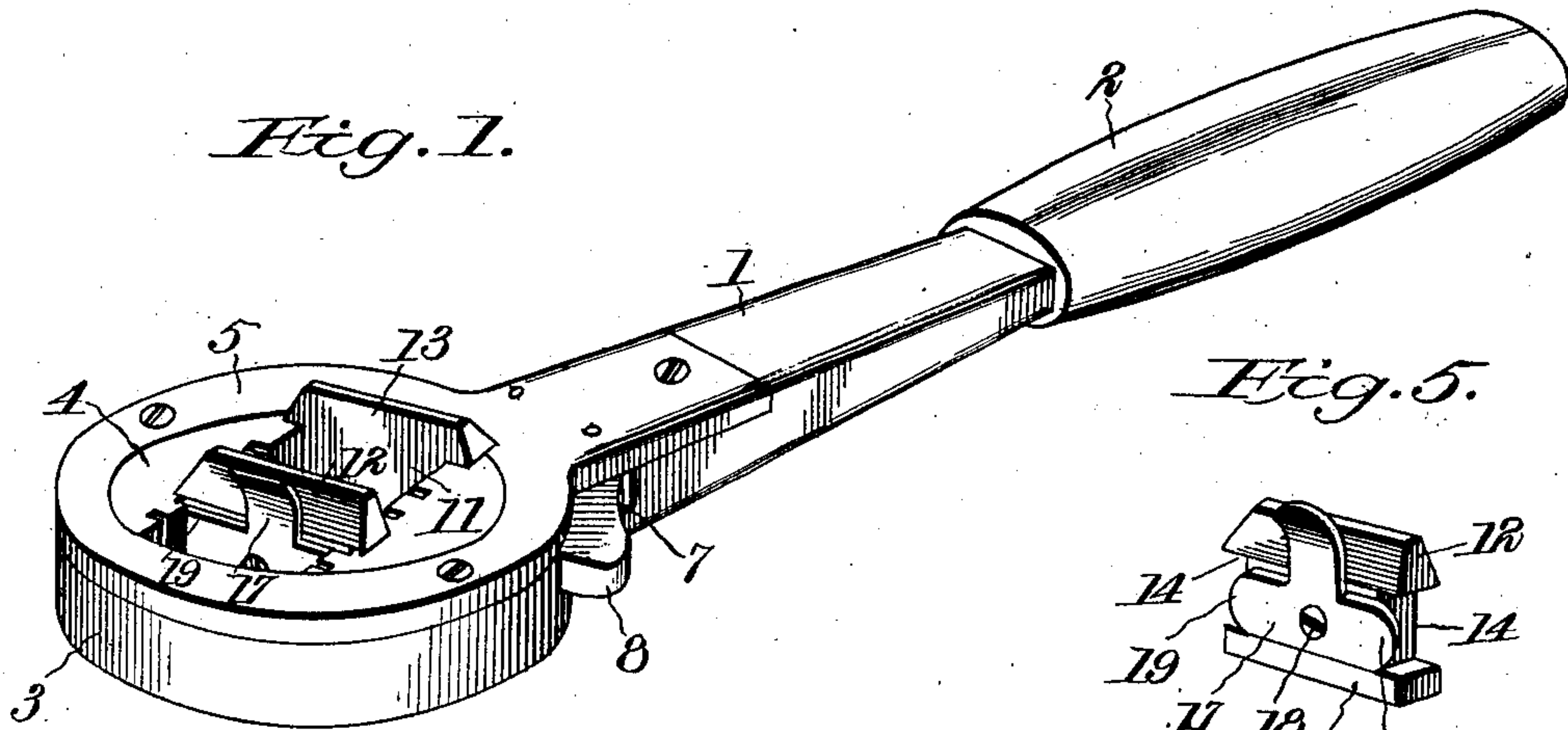
No. 745,397.

PATENTED DEC. 1, 1903.

L. C. SNYDER.
REVERSIBLE RATCHET WRENCH.

APPLICATION FILED AUG. 18, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

LLOYD C. SNYDER, OF FARMINGTON, WEST VIRGINIA, ASSIGNOR OF ONE-FOURTH TO GEORGE F. WADSWORTH, OF UPTON, WEST VIRGINIA.

REVERSIBLE RATCHET-WRENCH.

SPECIFICATION forming part of Letters Patent No. 745,397, dated December 1, 1903.

Application filed August 18, 1903. Serial No. 169,906. (No model.)

To all whom it may concern:

Be it known that I, LLOYD C. SNYDER, a citizen of the United States, residing at Farmington, in the county of Marion and State of West Virginia, have invented a new and useful Reversible Ratchet-Wrench; 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.

The invention relates to a reversible ratchet-wrench, and has for its object to improve the construction of wrenches and to provide an exceedingly simple and inexpensive one of great strength and durability adapted to be readily adjusted to a nut and capable after it has been once adjusted of being oscillated to screw the nut on or off without readjusting it.

A further object of the invention is to provide a wrench of this character adapted to be readily set to rotate a nut in either direction and capable of operating within a very small space.

With these and other objects in view the invention consists of the novel construction and arrangement of parts hereinafter described and shown, and particularly pointed out in the appended claims.

In the drawings forming a part of this specification, and in which like numerals of reference designate corresponding parts, Figure 1 is a perspective view of a wrench constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a longitudinal sectional view taken at right angle of Fig. 2. Fig. 4 is a transverse sectional view. Fig. 5 is a detail view of the adjustable jaw.

Referring to the drawings, 1 designates a shank or bar provided at one end with a handle 2 and having a circular head 3 at its other end forming a bearing for a ratchet-wheel 4, which is retained in the bearing by a removable ring or plate 5. The circular head is provided at one face with an annular flange 6, and the ring or plate 5 coöperates with the flange 6 to form a groove for the ratchet-wheel. The shank or bar 1 is provided at its outer end with a bifurcation 7, in which are

pivoted a pair of oppositely-disposed pawls 8, mounted on pins 9 and engaged by sides or portions of a spring 10, which is adapted to hold either of the pawls in engagement with the ratchet-teeth, whereby when the shank or bar is oscillated the ratchet-wheel is rotated in either direction. The pawls project outward and are adapted to be readily grasped, and the spring also operates to hold either of them in its disengaged position.

The ratchet-wheel is provided with a rectangular opening 11, in which is arranged an adjustable jaw 12, which coöperates with a fixed jaw 13, located at one end of the opening. The adjustable jaw is recessed at opposite sides at 14 to receive the ratchet-wheel, whereby it is slidably connected with the same, and it has a removable plate 15, operating in recesses 16 of the ratchet-wheel and having its outer face flushed with the adjacent face of the ratchet-wheel. The jaws project from the opposite face of the ratchet-wheel, and the adjustable jaw, which is movable to and from the fixed jaw, is locked at any desired adjustment by a pivoted catch 17. The pivoted catch 17 consists of a T-shaped plate arranged within the opening of the ratchet-wheel and secured to the movable jaw by a suitable fastening device 18. The T-shaped plate forms a handle or grip and a pair of oppositely-disposed arms 19, which are adapted to be swung out of and into engagement with opposite recesses of the sides of the ratchet-wheel.

The wrench is placed on a nut, and the adjustable jaw is moved against the same and locked in its adjusted position. The proper pawl is engaged with the ratchet-wheel, and the shank or bar is oscillated to screw the nut on or off. The circular head forms a narrow rim for the ratchet-wheel and enables the wrench to operate in a very small space.

What I claim is—

1. In a wrench, the combination of a shank or bar, having a head, provided with a bearing, a ratchet-wheel mounted in the bearing, and having an opening, oppositely-disposed spring-actuated pawls arranged to engage the ratchet-wheel, an adjustable jaw mounted in the opening of the ratchet-wheel, and a lock-

ing device carried by the adjustable jaw for engaging the ratchet-wheel at opposite sides of the opening, substantially as described.

2. The combination of a shank or bar having a bearing, a ratchet-wheel arranged in the bearing and provided with an opening and having opposite notches, a fixed jaw carried by the ratchet-wheel, an adjustable jaw slidably interlocked with the ratchet-wheel, and a pivoted locking device mounted on the jaw of the ratchet-wheel for engaging the notches of the ratchet-wheel, substantially as described.

3. In a wrench, the combination of a shank

or bar having a bearing, a ratchet-wheel mounted in the bearing, and provided with opposite notches, an adjustable jaw slidably interlocked with the ratchet-wheel, and a T-shaped catch pivotally mounted on the adjustable jaw and engaging the notches, substantially as described. 15 20

In testimony whereof I have hereto affixed my signature in the presence of two witnesses.

LLOYD C. SNYDER.

Witnesses:

A. W. SNYDER,
D. R. JONES.