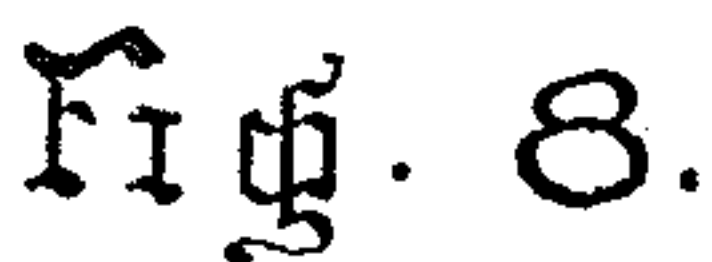
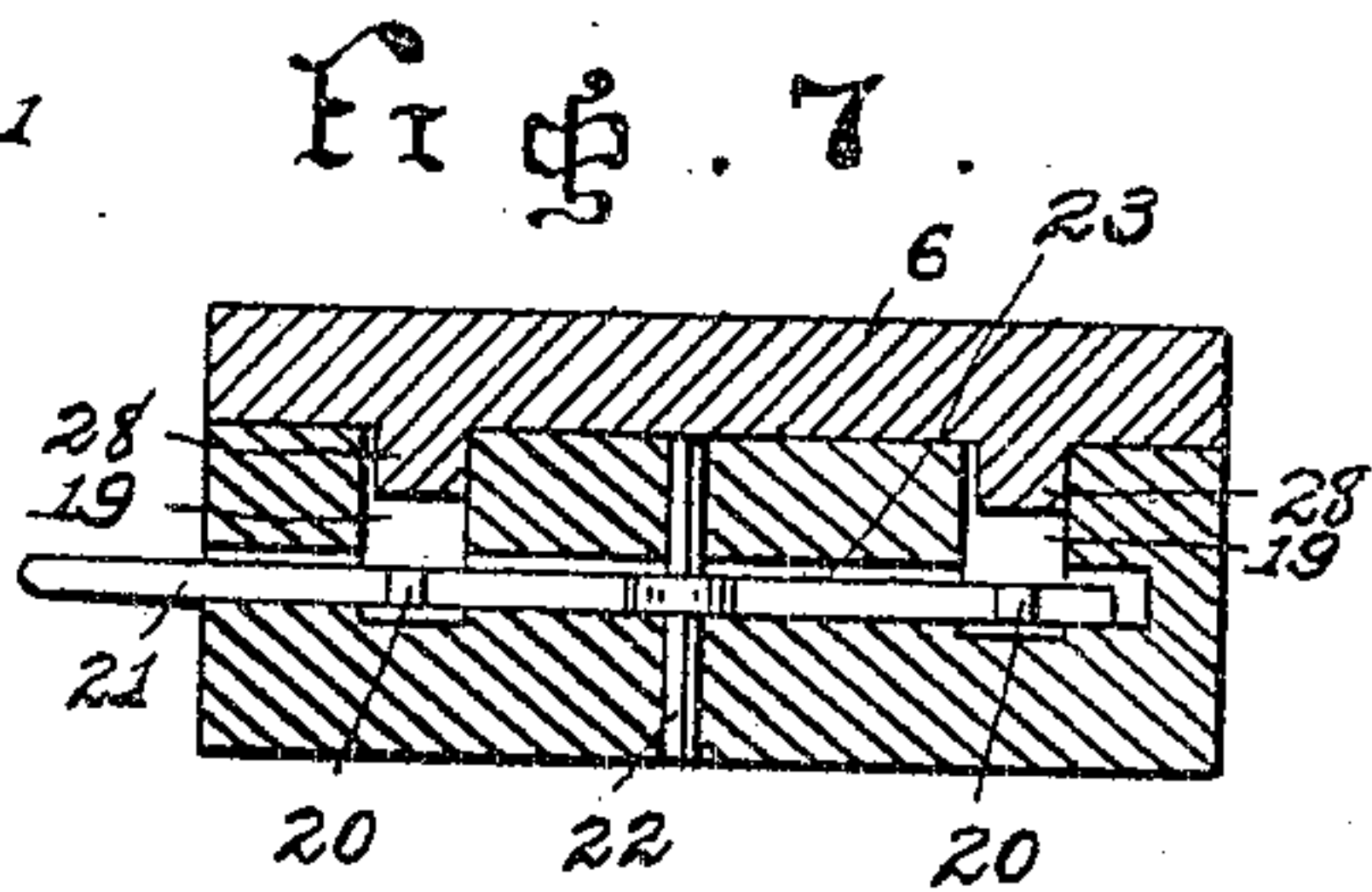
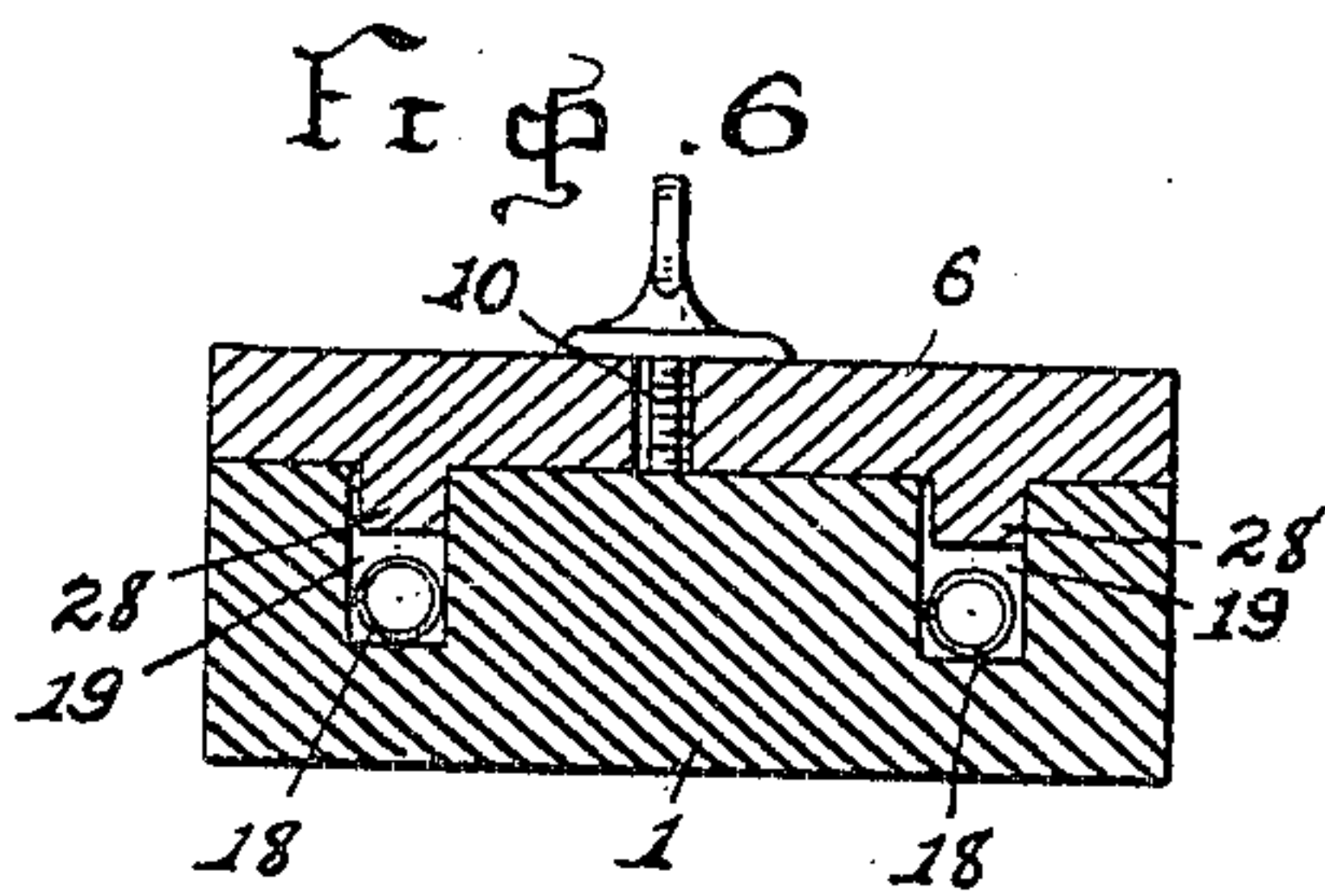
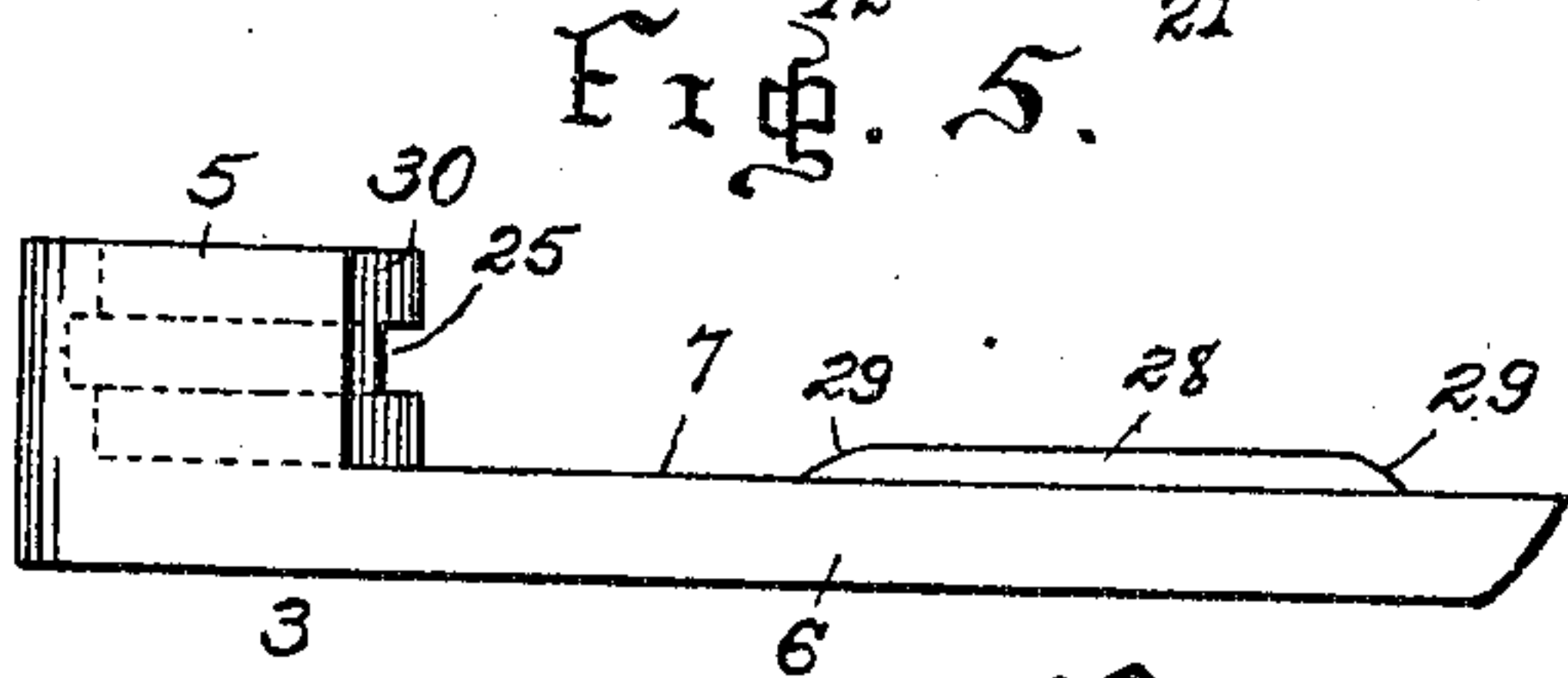
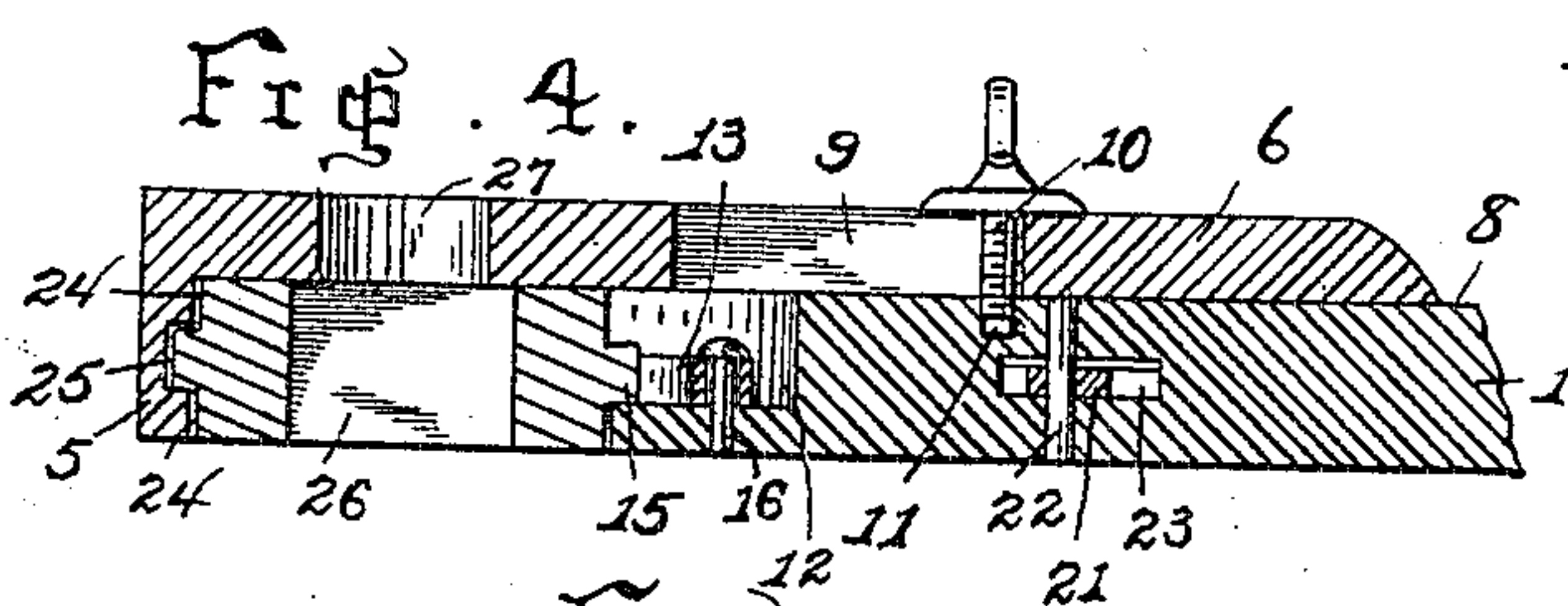
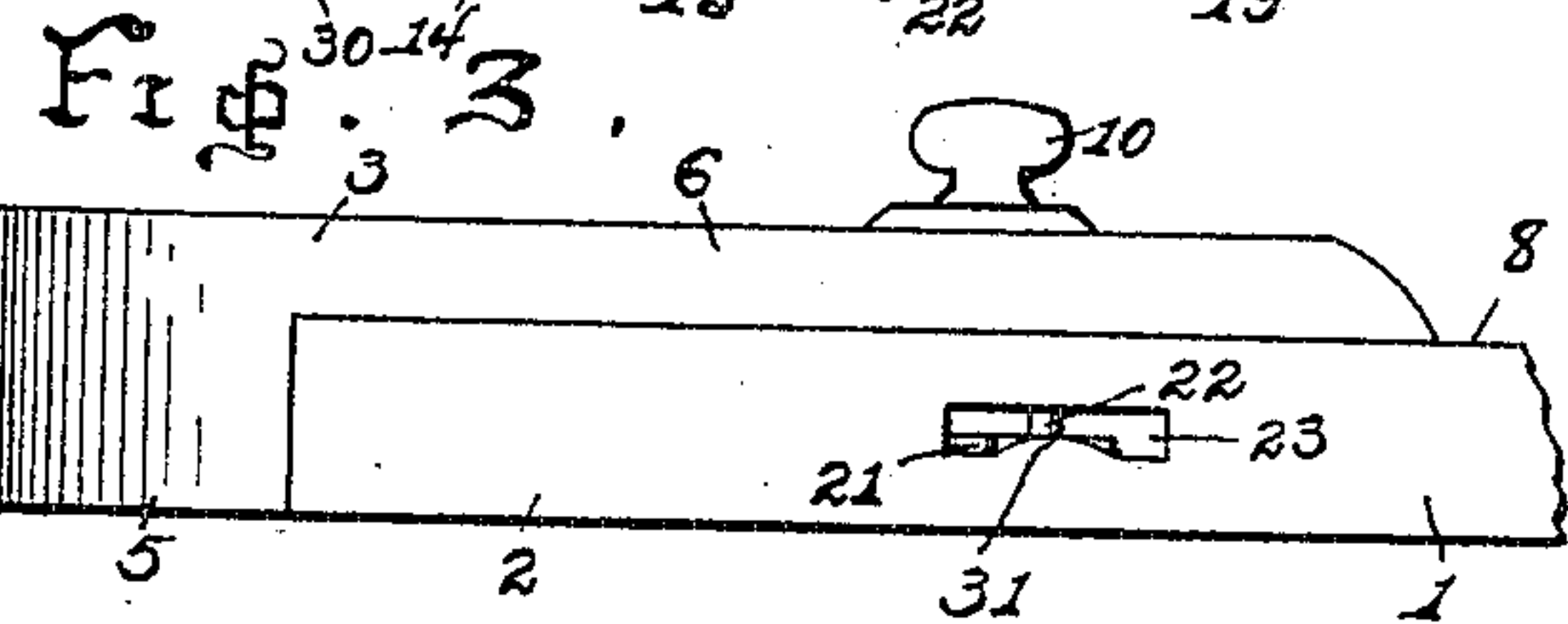
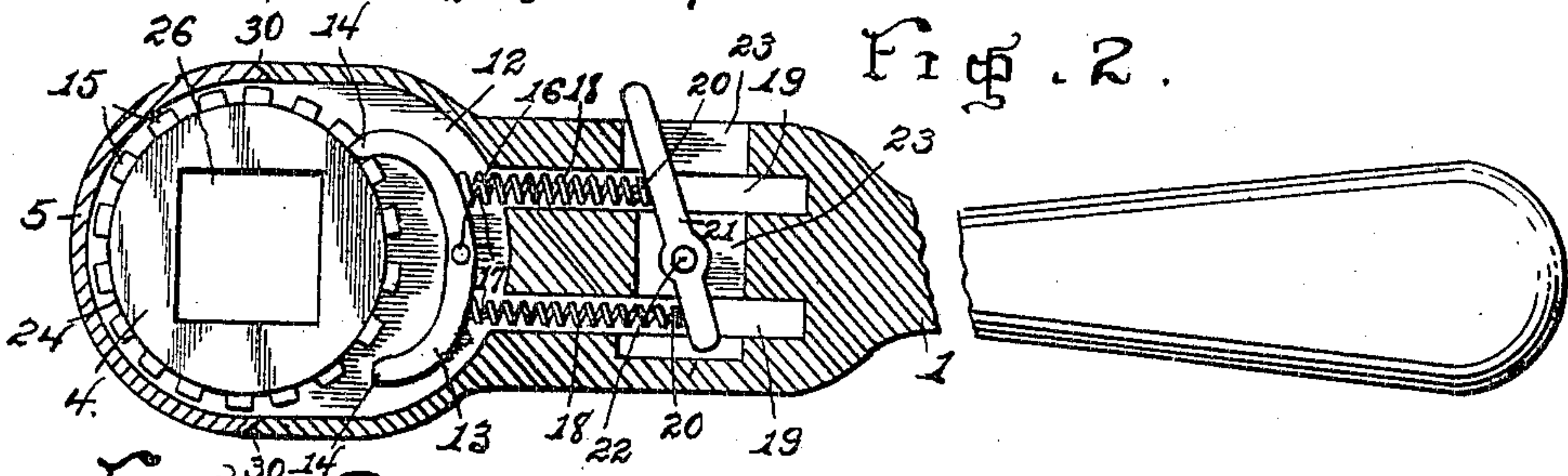
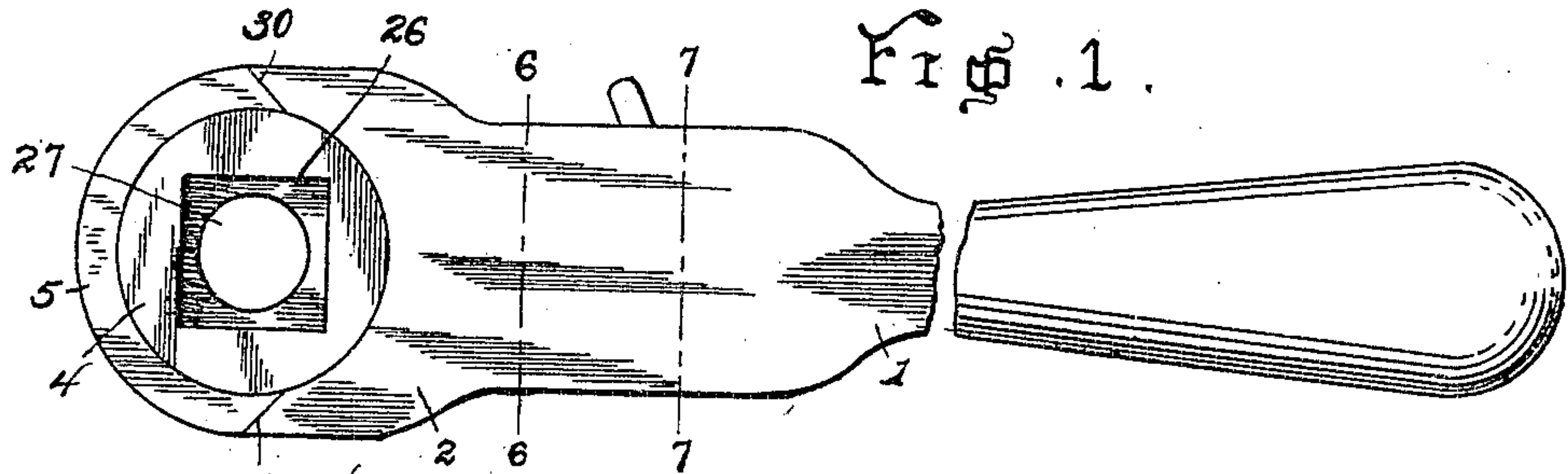


No. 837,291.

PATENTED DEC. 4, 1906.

O. L. ELLIOTT.
RATCHET WRENCH.
APPLICATION FILED JULY 12, 1906.



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RATCHET-WRENCH.

No. 837,291.

Specification of Letters Patent.

Patented Dec. 4, 1906.

Application filed July 12, 1906. Serial No. 325,865.

To all whom it may concern:

Be it known that I, OSCAR L. ELLIOTT, a citizen of the United States of America, and a resident of Keene, county of Coshocton, and State of Ohio, have invented certain new and useful Improvements in Ratchet-Wrenches, of which the following is a specification.

My invention relates to new and useful improvements in ratchet-wrenches; and it has for its object to provide a wrench the parts of which may be readily detached to admit of the quick removal of the rotary nut-engaging disk and the insertion of another, or, in other words, to provide a ratchet-wrench having a conveniently-removable nut-engaging portion.

A further object of the invention is to provide a simple, durable, and comparatively inexpensive wrench of the character mentioned.

In describing the invention in detail reference is herein had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of the invention. Fig. 2 is a longitudinal horizontal section of the same. Fig. 3 is an edge view of the same. Fig. 4 is a longitudinal vertical section of the same. Fig. 5 is an elevation of the movable jaw detached. Fig. 6 is a cross-section on the line 6 6, Fig. 1. Fig. 7 is a similar section on the line 7 7, Fig. 1; and Fig. 8 is a vertical section of the ratchet-disk.

Referring to said drawings, in which like reference-numerals designate like parts throughout the several views, 1 indicates a stock or handle having an enlarged front end 2, and 3 indicates an adjustable jaw, which, together with the said front end 2 of the stock, constitutes a head in which is mounted a rotatable ratchet-disk 4.

The end 2 of the stock is concavely curved, as shown, forming a semicircular jaw for embracing said ratchet-disk 4 upon one side, while a semicircular lip or jaw-like flange 5 composing a part of the adjustable jaw 3 embraces the other side of said disk. Integral with said flange 5 and with said flange constituting said adjustable jaw 3 is a longitudinal body portion 6, having a flat face 7 for fitting against the flat face 8 of the end 2 of the stock. A longitudinal slot 9 is provided in the body portion 6, through which is projected the body of a set-screw 10, the point

of which is in threaded engagement with a socket 11 in the stock. As is apparent, the said stock 1 and jaw 3 may be held rigidly in relation to each other by tightening said set-screw and may be quickly released, permitting a longitudinal separation of the disk-engaging portions by releasing said set-screw.

Centrally pivoted in a recess 12 in the front end 2 of the stock is an anchor-pawl 13, the ends or points 14 of which are adapted when so actuated to respectively engage the teeth 15 of the ratchet-disk 4. On the rear edge of said pawl 13 on opposite sides of the pivot 16 are studs 17, each of which engages the front end of a spiral spring 18. Said springs lie in deep parallel longitudinal grooves or channels 19 in said stock 1 and have their rear ends encircling studs 20, provided upon a lever 21, which is pivoted at 22 and which is operative in a slot 23 in said stock. The end of said lever projects outward beyond the edge of the stock, as shown, thus providing means whereby it may be manipulated.

On each side of the peripheral ratchet-teeth 15 of the ratchet-disk 4 are shoulders 24, which fit closely against corresponding shoulders in the wrench-head. A groove 25 is provided in the lip or flange 5 of the jaw 3, in which the said teeth lie.

The ratchet-disk may be of a size which admits of its face lying flush with the face of the wrench-head, as shown in Figs. 1 and 4, or it may be elongated, as shown in Fig. 8, to cause it to project outward beyond the face of the wrench-head. A nut-engaging eye 26 extends through the disk, as shown, and in the jaw 3 is provided an axially-registering eye 27, through which the end of a bolt or rod may be allowed to project.

As a means of rigidly holding the stock 1 and jaw 3 against lateral movement one on the other two integral longitudinal ribs 28 are provided upon the flat face 7 of the body portion 6 of the jaw 3, said ribs being adapted for engagement with the grooves or channels 19 over the springs 18. Said grooves or channels serve the double purpose of holding the springs and said ribs and, as is evident, in adjusting the stock and jaw 3 in relation to each other after releasing the set-screw the movement is on account of the interlocking ribs and grooves a longitudinal one, said ribs sliding in said grooves over or above said springs. In order to prevent said ribs

from catching upon said springs, the former are preferably provided with beveled or curved ends 29, as is clearly shown in Fig. 5.

5 The meeting edges of the parts constituting the head of the wrench are preferably beveled, as shown at 30, for a purpose which is clearly obvious.

10 A swell 31 is provided on one side of the slot 23 at its outer end, as shown in Fig. 3, over which the end of the lever is sprung in moving it from one position to the other, said swell serving to hold said lever against accidental displacement after having been adjusted.

15 It is evident that when it is desired to adapt the wrench for rotating a nut of a size differing from that of the eye 26 in the disk held by the head said disk may be quickly removed by releasing the set-screw 10 and separating the stock and movable jaw. 20 Then a disk having therein an eye of the required size may be readily inserted.

Having thus fully described my invention, what I claim as new, and desire to secure by 25 Letters Patent, is—

In a ratchet-wrench, a stock having its

front end shaped to form a semicircular jaw, a second jaw adjustable with relation to the first-mentioned jaw, a ratchet-disk held by said jaws and rotatable therebetween, a longitudinal body portion integral with said second jaw, said body portion overlying the face of the stock and having a slot therein, a set-screw projecting through said slot into threaded engagement with the stock, a centrally-pivoted anchor-pawl mounted for engagement with said ratchet-disk, grooves or channels in said stock, springs mounted in said grooves in engagement with said anchor-pawl on opposite sides of its pivot, a lever for simultaneously actuating one end of said pawl to engage the ratchet-disk and for withdrawing the opposite end, and means for preventing relative lateral movement of the disk-holding jaws. 30 35 40 45

Signed by me in presence of two subscribing witnesses.

OSCAR L. ELLIOTT.

Witnesses:

H. E. DUNLAP,

ROBT. F. DILWORTH.