

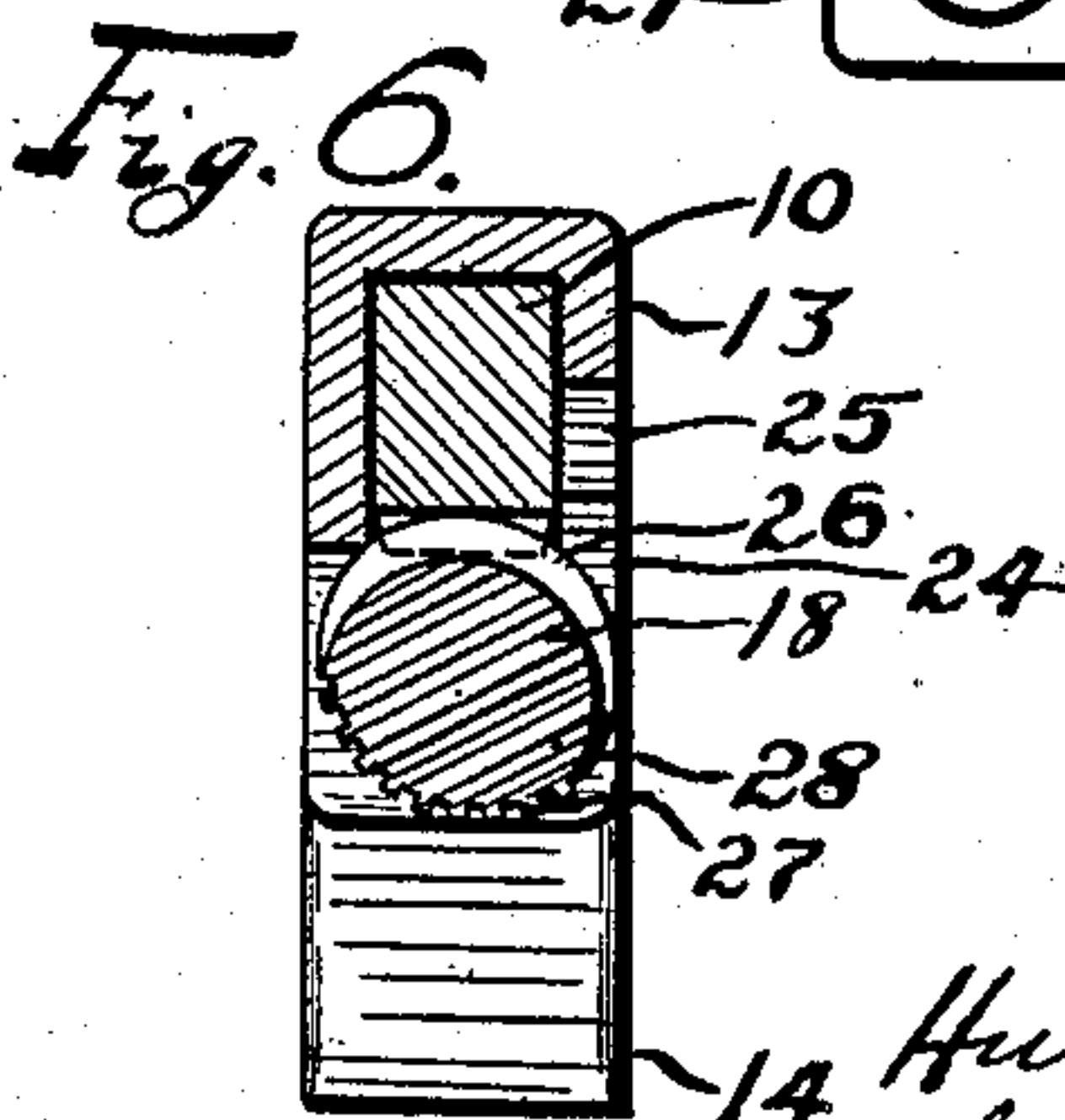
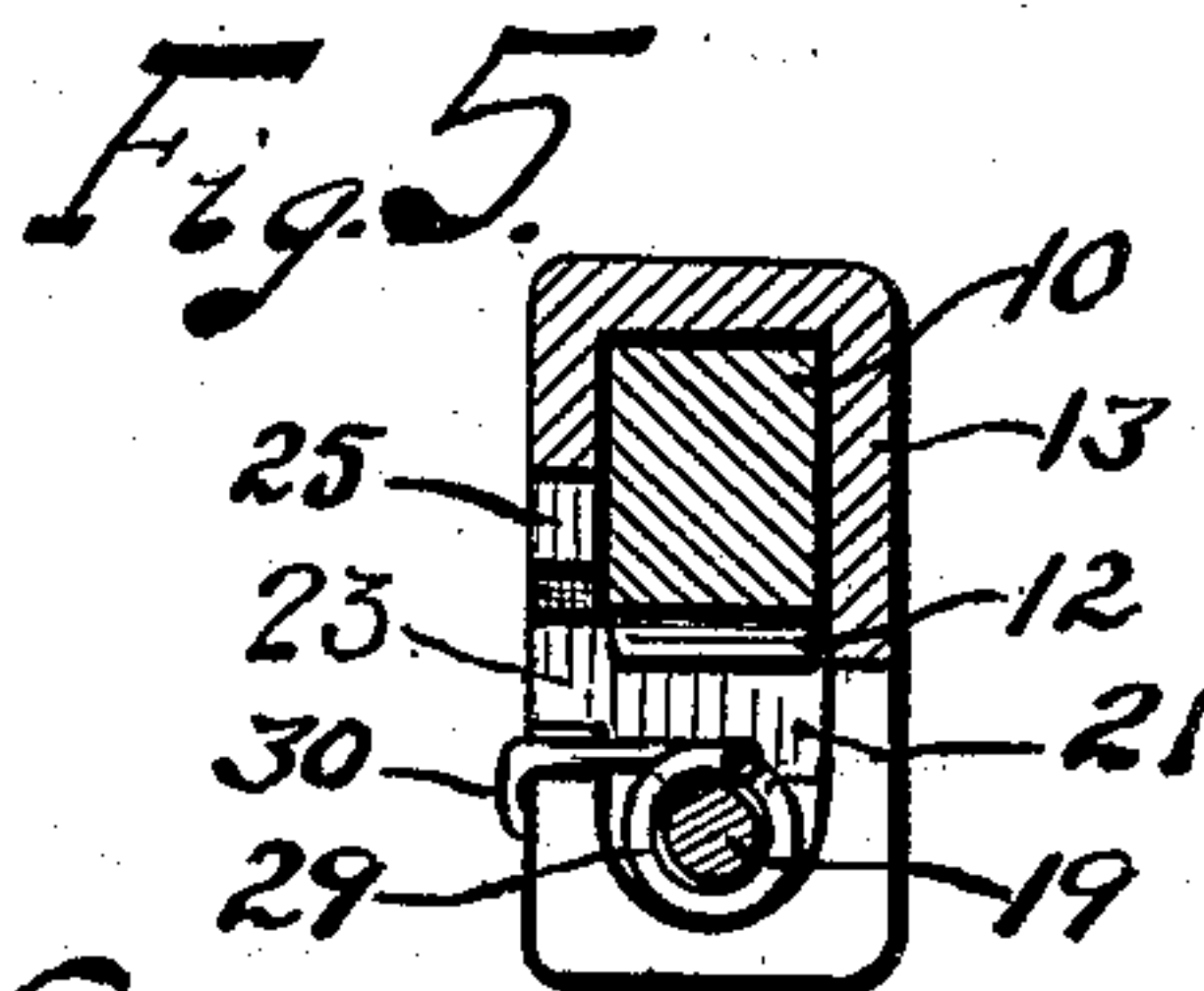
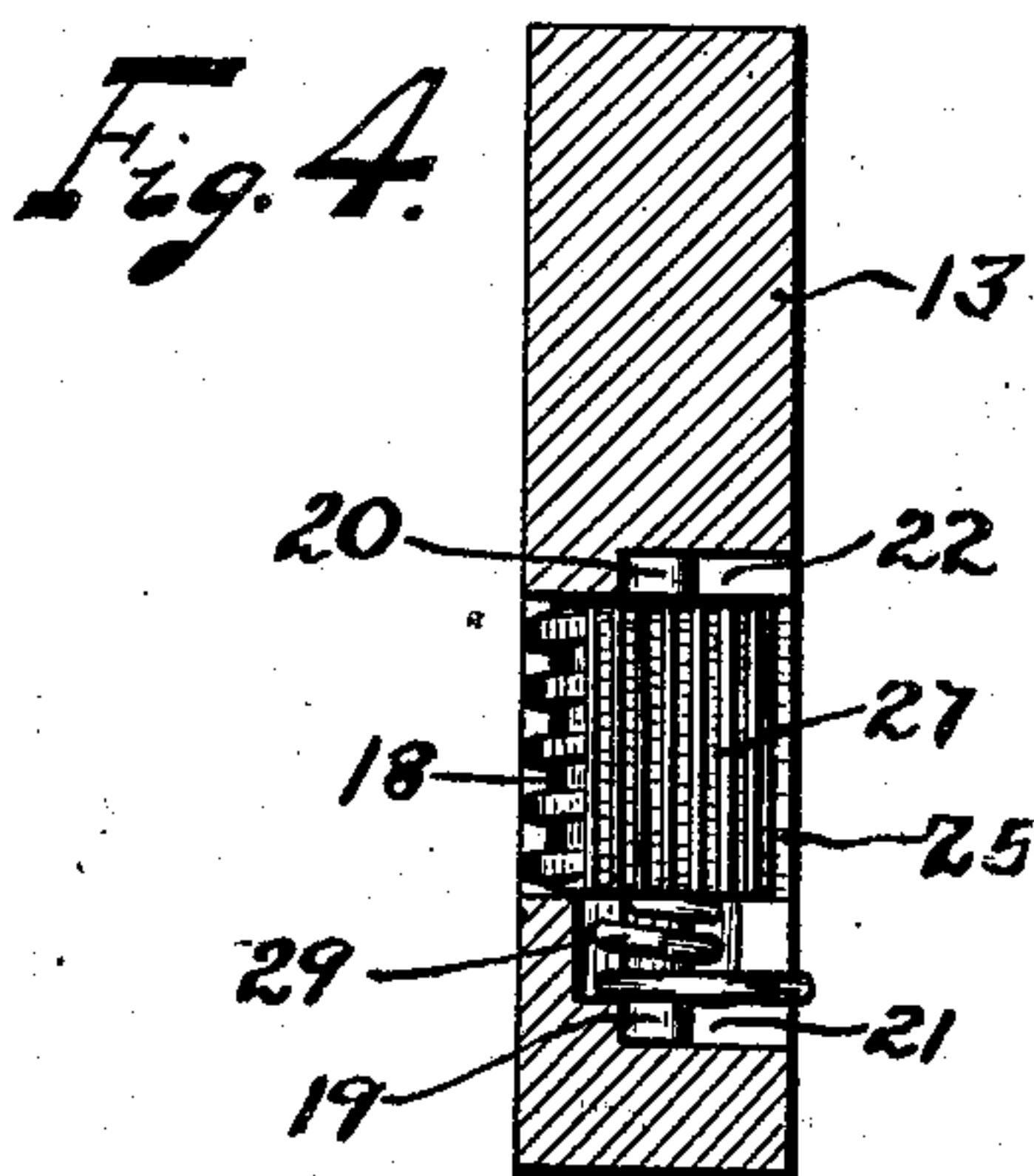
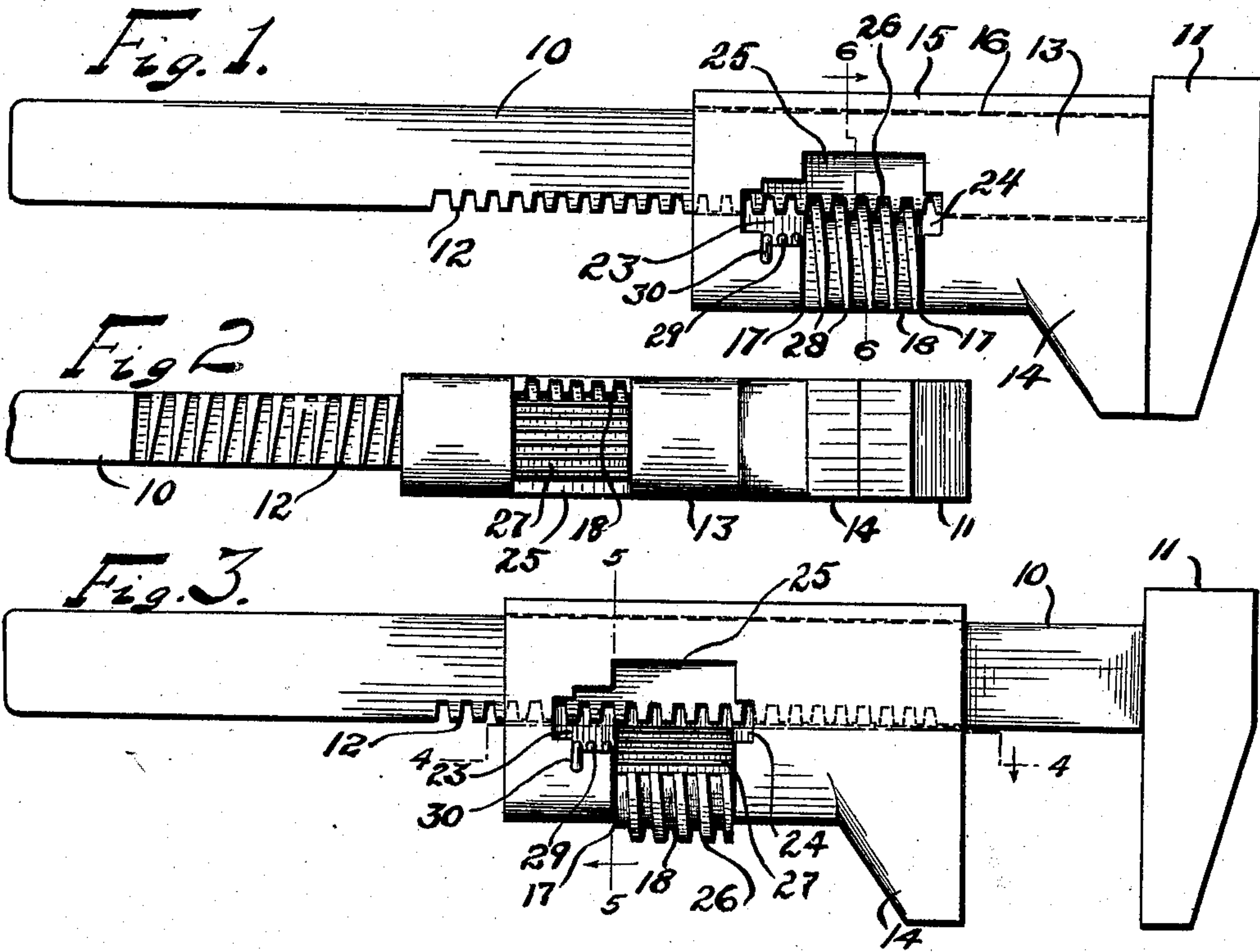
H. TAR'BUSH.

WRENCH.

APPLICATION FILED NOV. 23, 1907.

924,292.

Patented June 8, 1909.



Witnesses:
J. A. McIntyre,
W. L. McDonnell.

Inventor:
Hubert Tar Bush
by Lynch & Dorr
his Attorneys.

UNITED STATES PATENT OFFICE.

HUBERT TAR' BUSH, OF LAKEWOOD, OHIO, ASSIGNOR OF ONE-HALF TO GEORGE BAKER, OF CLEVELAND, OHIO.

WRENCH.

No. 924,292.

Specification of Letters Patent.

Patented June 8, 1909.

Application filed November 23, 1907. Serial No. 403,554.

To all whom it may concern:

Be it known that I, HUBERT TAR' BUSH, a citizen of the Dominion of Canada, residing at Lakewood, in the county of Cuyahoga and State of Ohio, United States of America, have invented certain new and useful Improvements in Wrenches; and I 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 pertains to make and use the same.

This invention relates to improvements in wrenches.

The object of this invention is to provide means whereby the movable clamping jaw of the wrench can be quickly shifted and automatically tightened.

A further object of the invention is to provide a wrench which will be simple in construction and strong and durable.

In carrying out my invention I provide the shank portion, which carries the fixed jaw with a rack and the movable jaw with a hollow body or sleeve portion arranged to slip freely on the shank portion. The body portion of the movable jaw carries an adjusting screw which is arranged to engage with the teeth of the rack. The adjusting screw is threaded only on a portion of its circumference so that the movable member or jaw of the wrench can be slid lengthwise of the shank by simply turning the screw so that its threaded portion is no longer in engagement with the rack. A spring is located in a recess or pocket in the body of the movable member of the wrench and is so arranged with respect to the adjusting screw that when the latter is turned so that its threads are free of the rack teeth the spring is under tension and when released it will immediately be turned automatically by the action of the spring so as to cause the tightening of the movable jaw. Thus it will be seen that the operator can slide the movable jaw up to the object to be clamped between the jaws by holding the adjusting screw in position such that its threads are free from the rack teeth, then by simply removing his thumb from the adjusting screw, the screw will be rotated by the action of the spring and the jaw will be tightened or clamped in position.

In the accompanying drawings, Figure 1 is a side elevation of a wrench equipped

with my invention, the adjusting screw being in the position to which it is turned by the spring. Fig. 2 is a bottom view of same with a portion of the shank broken away. Fig. 3 is a side elevation of same showing the jaws apart and the adjusting screw in position such that the movable jaw can be slid freely over the shank. Fig. 4 is a section on line 4—4, Fig. 3, looking in the direction indicated by the arrow. Fig. 5 is a transverse section on line 5—5, Fig. 3, looking in the direction indicated by the arrow. Fig. 6 is a transverse section on line 6—6, Fig. 1, looking in the direction indicated by the arrow.

Again referring to the drawings 10 represents the shank of the wrench which is provided at one end with a fixed jaw 11 and on one side with a series of rack teeth 12. As shown in Fig. 2 one side of each tooth is inclined with respect to the other so that the tooth is narrower at one end than the other, for a purpose which will be explained later. The movable member of the wrench, shown at 13, has a jaw 14 adapted to cooperate with the fixed jaw 11 and a shank or body 15 which is provided with a longitudinal passage-way 16 through which the shank 10 passes. The body or sleeve of the movable member 13 is provided at the rear of the clamping jaw with a recessed or cut away portion 17 for the adjusting screw 18 which is rotatably supported in position by reduced portions or studs 19 and 20 which are seated in suitable recesses or pockets 21 and 22 in the opposite walls of the recessed portion 17. The reduced portion 19 is longer than the portion 20 and the recess or pocket 21 is longer than the recess 22 and is enlarged adjacent the body of the adjusting screw. The wall of the body or shank 13 is cut away on one side, at 23, 24 and 25, to permit the insertion of the adjusting screw 18. The screw 18 is provided with threads 26 which extend only partially around the same, the unthreaded portion 27 being roughened or knurled by means of a series of grooves and ridges in order that it may be readily engaged by the thumb of the operator and rotated as desired. The ends of the threads on the screw which first engage the rack teeth are inclined or comparatively sharp, as shown at 28, and these portions of the threads engage the narrow

ends of the teeth so that there is no danger of the corner of the threads catching on the ends of the teeth.

Located in the enlarged portion of the
5 recess or pocket 21 and surrounding the reduced portion 19 of the adjusting screw is a coiled spring 29 which is secured at one end to the adjusting screw and its other end bears upon the wall of the body of the
10 movable member 13 at 30. The relation of the spring and the threads of the adjusting screw is such that the spring tends to turn the adjusting screw so that the threaded portion thereof will engage the rack teeth
15 12, on the shank 10 and thereby clamp and lock the movable jaw.

To use the wrench, the adjusting screw is turned against the tension of the spring so that the unthreaded portion of the screw is
20 opposite the rack teeth then the movable member of the wrench may be shifted freely along the shank 10. When the adjusting screw is released the screw is turned by the spring through a portion of a revolution so
25 that the threads engage the rack teeth and this movement securely clamps the movable jaw and locks it in position.

I do not desire to be confined to the exact details shown but aim in my claim to cover

all modifications which do not involve a departure from the spirit and scope of my invention. 30

What I claim is,—

In a wrench, a shank having a fixed jaw and provided with rack-teeth, a movable 35 member comprising a clamping jaw and a body portion formed integral therewith, said movable member having a bore for receiving said shank and also bearing-forming recesses for the ends of the adjusting screw, 40 the sides of said recesses being open into said bore, said body-portion also having an opening in the side thereof of sufficient size to permit the insertion of the adjusting screw therethrough, an adjusting screw hav- 45 ing trunnions adapted to fit into the bearing-forming recesses in the body portion and a spring arranged in one of said recesses and operatively connected with said adjusting screw, for the purpose set forth. 50

In testimony whereof, I sign the foregoing specification, in the presence of two witnesses.

HUBERT TAR' BUSH.

Witnesses:

DANIEL E. DALY,
VICTOR C. LYNCH.

It is hereby certified that the name of the assignee in Letters Patent No. 924,292, granted June 8, 1909, upon the application of Hubert Tar' Bush, of Lakewood, Ohio, for an improvement in "Wrenches," was erroneously written and printed "George Baker," whereas the said name should have been written and printed *George Barker*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 27th day of July, A. D., 1909.

[SEAL.]

C. C. BILLINGS,
Acting Commissioner of Patents.