

A. & B. W. FRESKO.

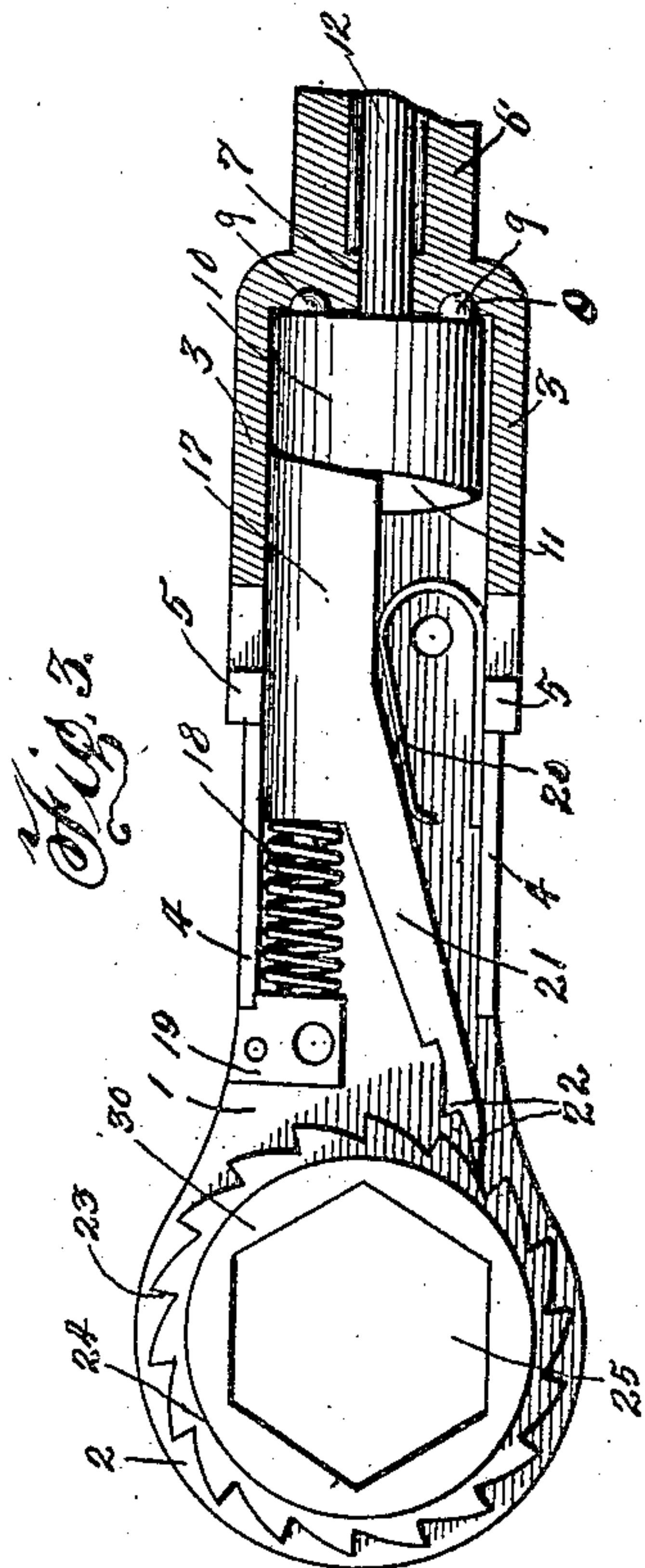
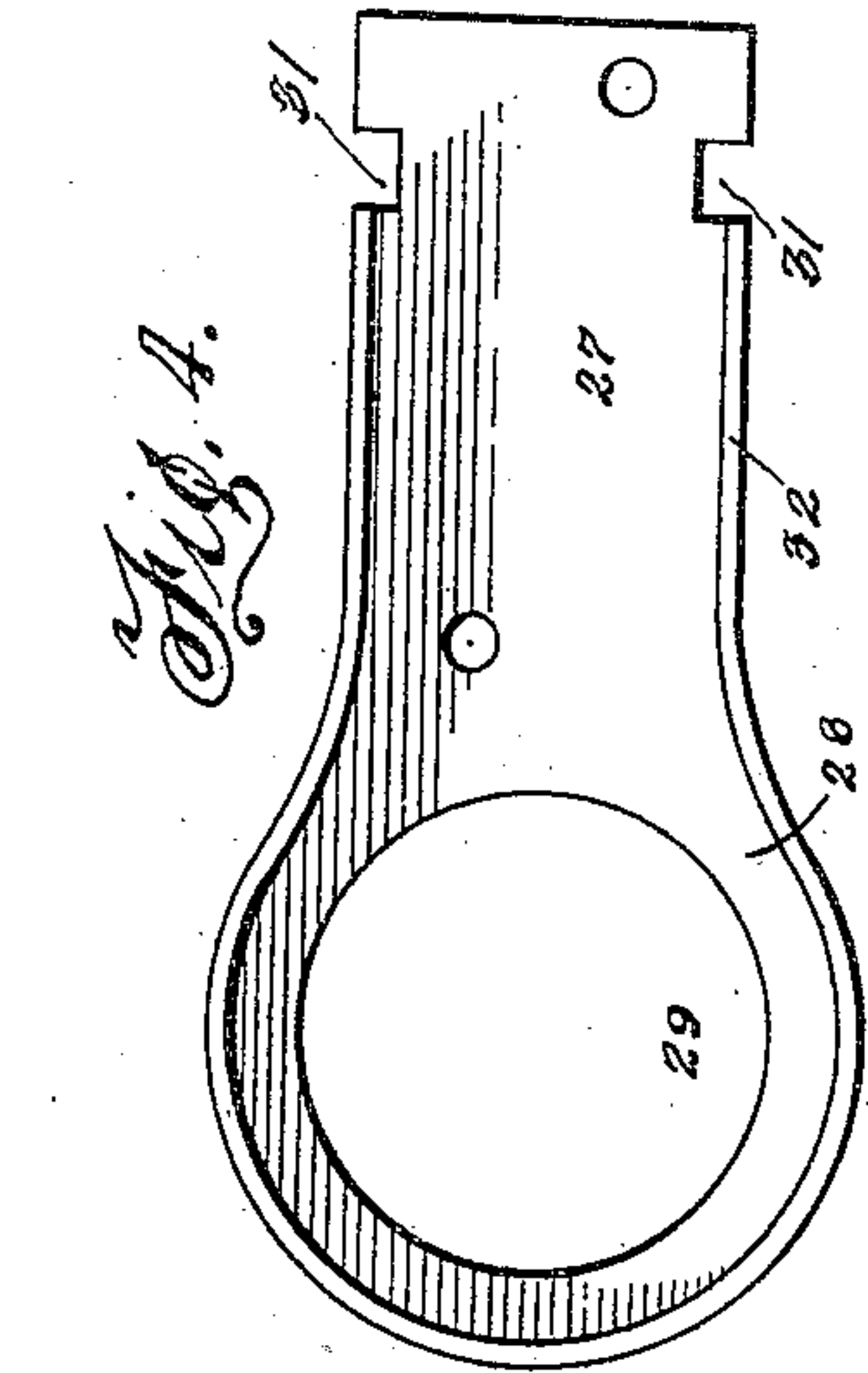
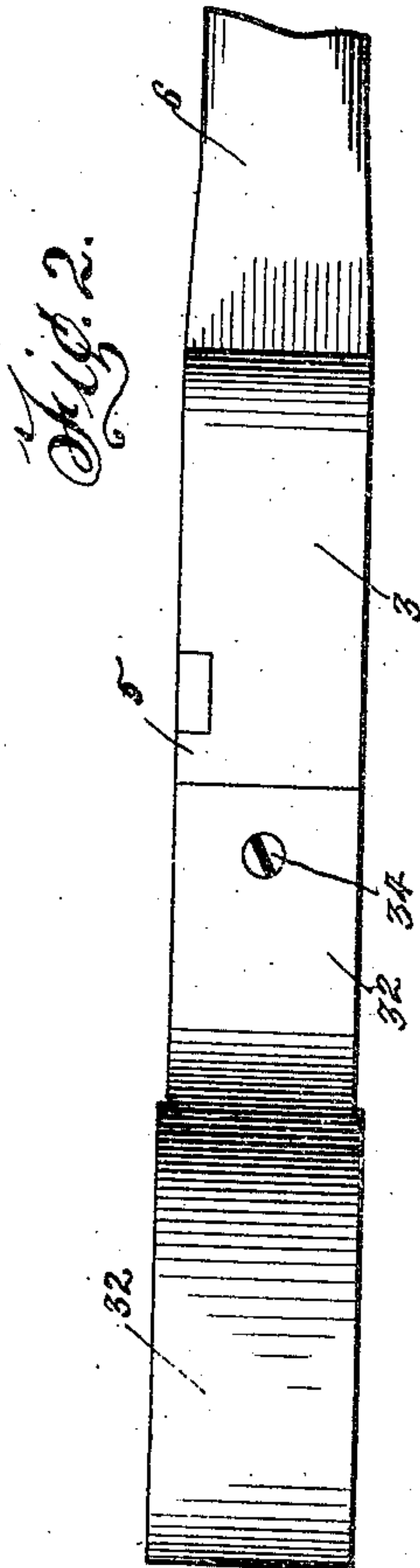
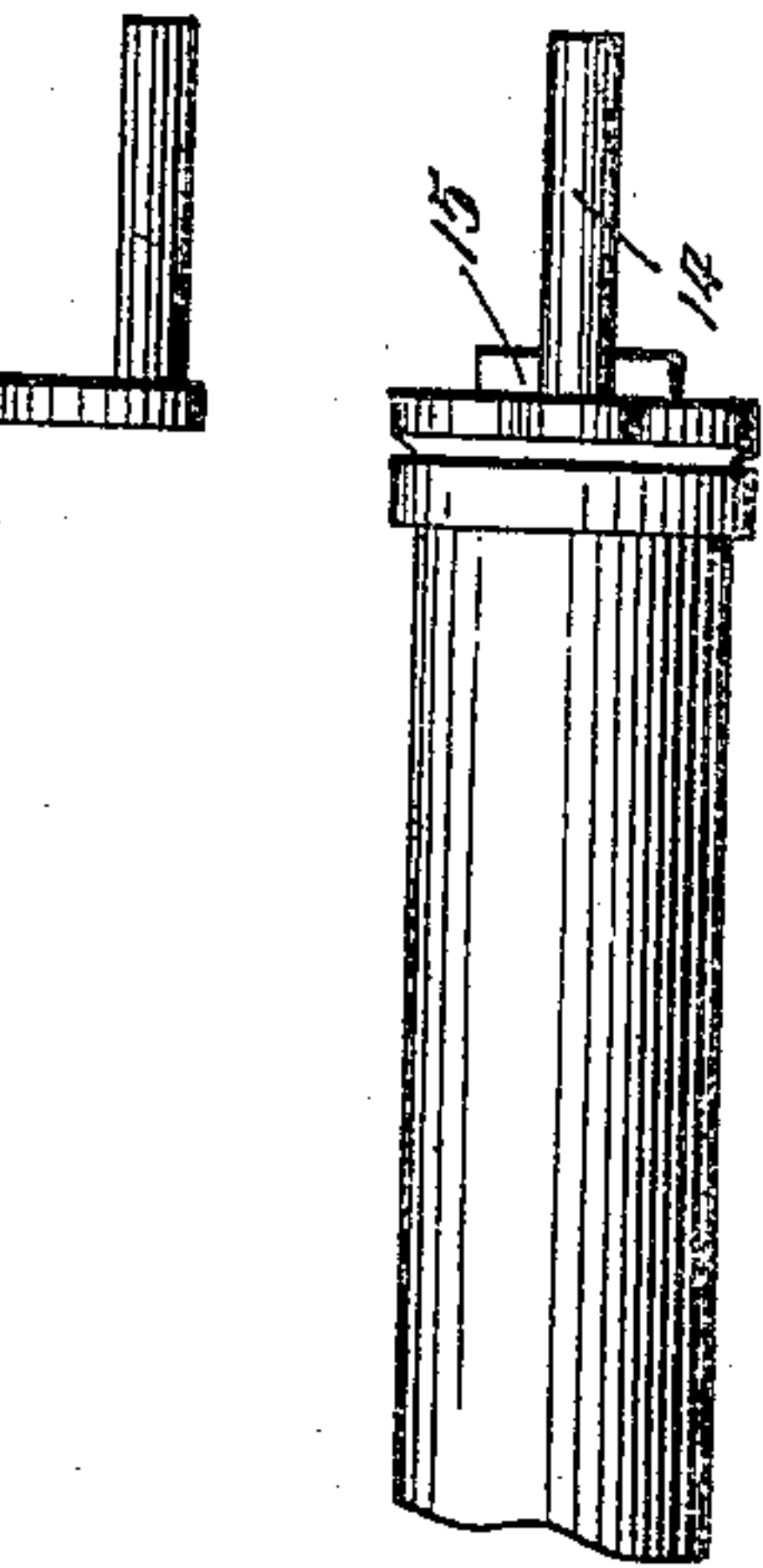
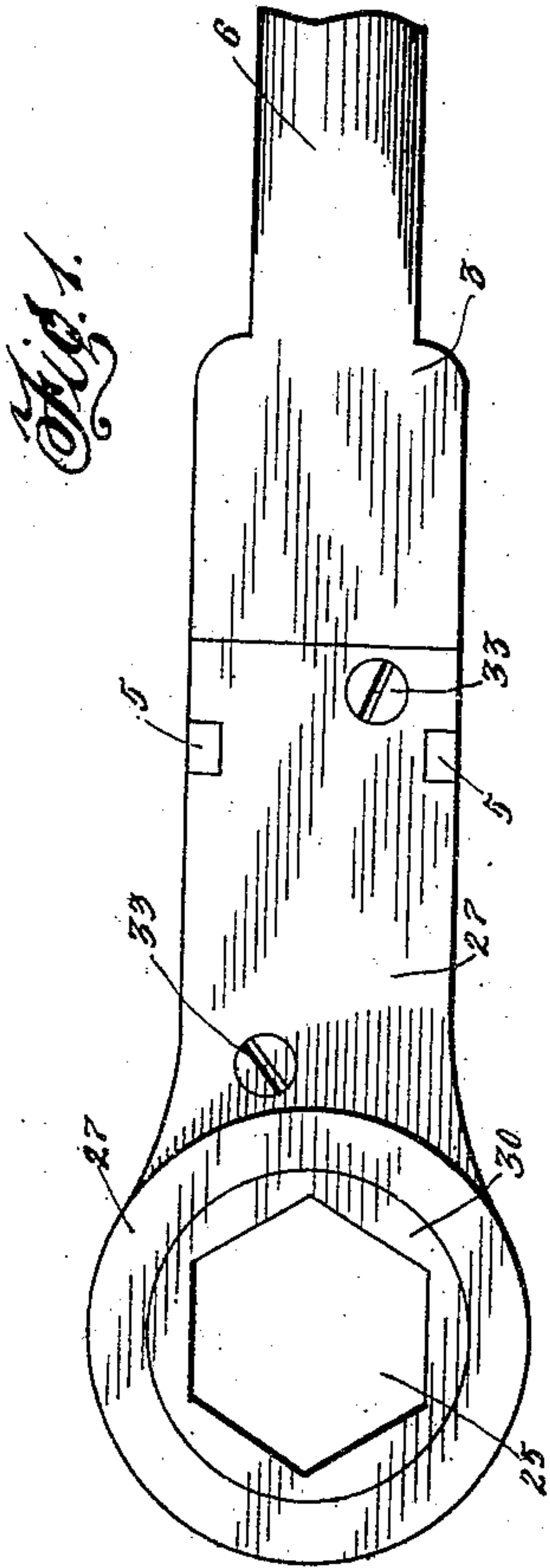
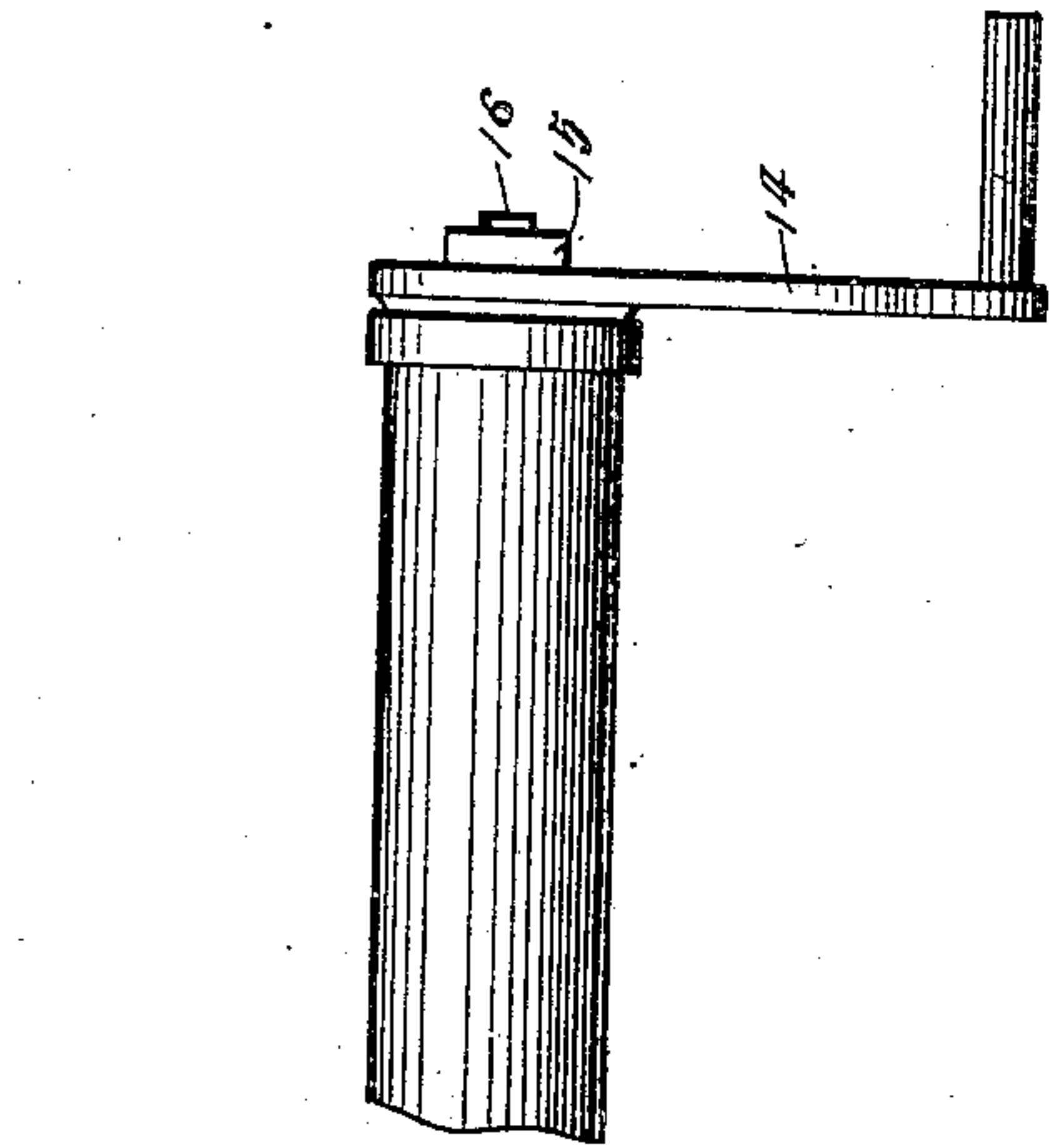
WRENCH.

APPLICATION FILED JAN. 28, 1909.

935,482.

Patented Sept. 28, 1909.

2 SHEETS—SHEET 1.



Witnesses
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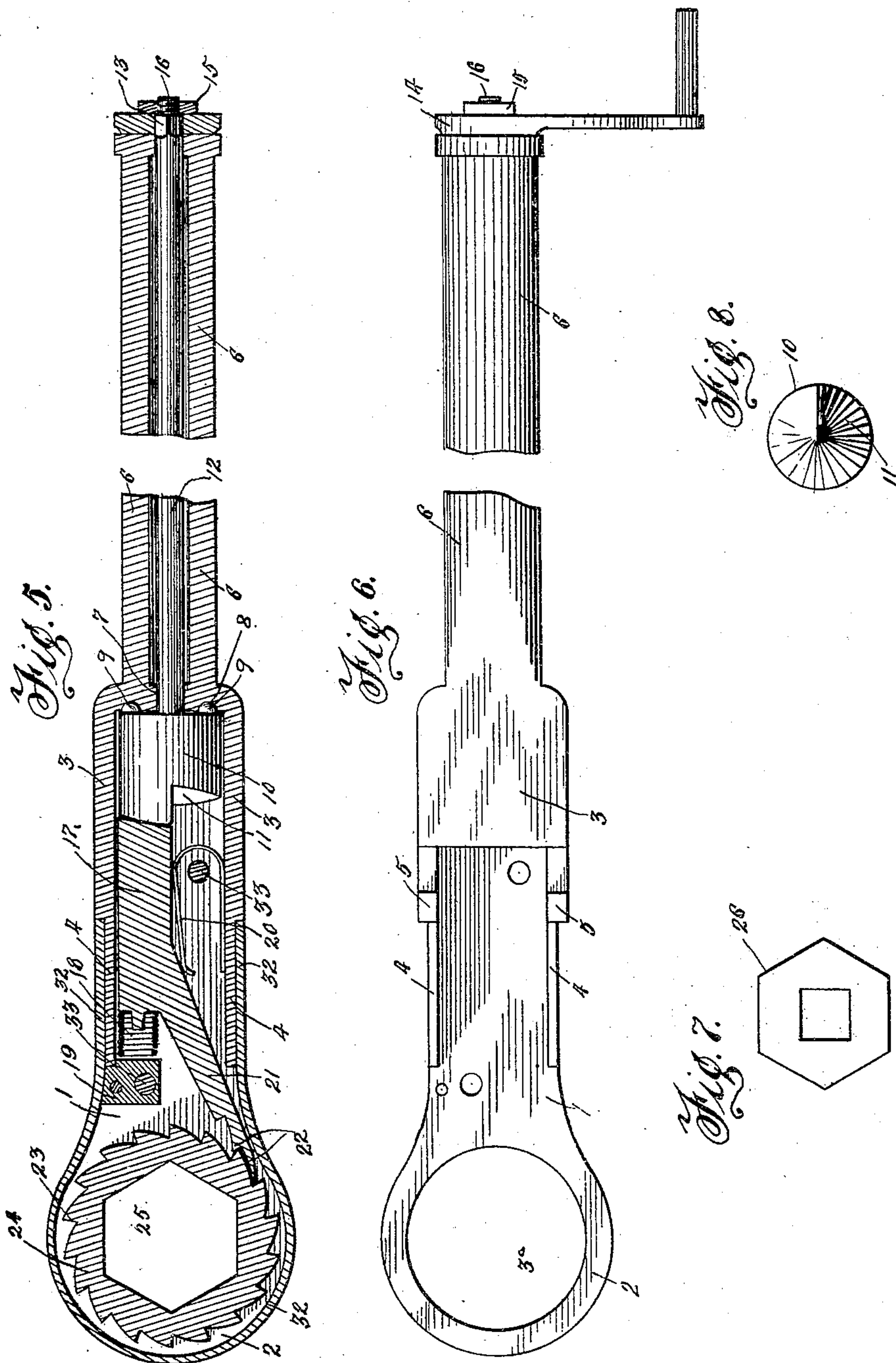
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2 SHEETS—SHEET 2.

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Witnesses

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UNITED STATES PATENT OFFICE.

ALEX FRESKO AND BELA W. FRESKO, OF AMSTERDAM, OHIO.

WRENCH.

935,482.

Specification of Letters Patent. Patented Sept. 28, 1909.

Application filed January 28, 1909. Serial No. 474,679.

To all whom it may concern:

Be it known that we, ALEX FRESKO and BELA W. FRESKO, subjects of the King of Hungary, residing at Amsterdam, in the county of Jefferson and State of Ohio, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to ratchet wrenches, and the primary object of the invention is to provide a wrench with positive and reliable means for rotating a nut or drill socket while the wrench is held stationary.

A further object of this invention is to provide a strong and durable wrench that can be used in places inaccessible to the ordinary type of wrench, thereby facilitating the work of artisans.

We attain the above objects by providing a wrench with a novel ratchet mechanism that can be manipulated from the end of the wrench to rotate a nut or drill socket at the opposite end.

The detail construction of the ratchet mechanism will be hereinafter described, and then specifically claimed.

In the drawings, Figure 1 is a plan of a wrench partly broken away, Fig. 2 is an edge view of the same, Fig. 3 is a plan of a portion of the wrench partly broken away and partly in section, Fig. 4 is a bottom plan of a detachable cover plate, Fig. 5 is a horizontal sectional view of a wrench partly broken away, Fig. 6 is a plan of the body of the wrench, Fig. 7 is a plan of a nut or drill socket, and Fig. 8 is an end view of a ratchet actuating head.

In the accompanying drawings, 1 designates a plate having one end thereof provided with a large head 2, having a central large opening 3^a. The opposite end of the plate 1 is formed with a rectangular housing 3 having projecting parallel side walls 4, of a less depth than the walls of the housing 3, said projecting walls having oppositely disposed outwardly extending lugs 5. The housing 3 is provided with a rearwardly extending cylindrical and tubular handle 6, communicating with the interior of the housing 3 by an opening 7.

The rear inner end of the housing 3 is provided with a ball race 8 for a plurality of anti-friction balls 9, and adapted to engage said balls is a cylindrical ratchet actuating head 10, having the end thereof provided

with a cam path 11, while the opposite end is connected to a rod 12, extending rearwardly through the opening 7 and through the handle 6. The end of the rod 12 protrudes from the handle and is rectangular, as at 13, to fit an opening in a crank 14. To retain the crank upon the rod 12, the nut 15 is screwed upon the threaded contracted end 16 of said rod.

Movably arranged in the housing 3 is a plunger 17 held in engagement with the cam path 11 of the head 10 by a coil compression spring 18 arranged between the end of the plunger 17 and a block 19 mounted upon the plate 1. The plunger 17 is retained in engagement with one of the walls 4, by a spring 20 arranged between the other of said side walls and the plunger 17. Extending forwardly from the plunger 17 is a pawl 21 having teeth 22 for engaging the teeth 23 of a block 24 revolvably mounted in the opening 3^a of the plate head 2. The block 24 is provided with a central hexagonal-shaped opening 25, to receive a nut or drill socket 26, or to receive a hexagonal nut of a size to fit in said opening.

Fitting upon the projecting walls 4, of the housing 3 is a cover plate 27 having a circular head 28 provided with a central opening 29 to receive the cylindrical collar 30 of a block 24. The cover plate 27 is notched, as at 31, to receive the lugs 5 and is provided with a depending flange 32 adapted to inclose the projecting walls 4, the plate head 2, and the ratchet block 24, said cover plate being secured in position by screws 33 and 34, the former screwing into the plate 1, while the latter are screwed into the walls 4.

By holding the handle 6 in one hand, the ratchet actuating head within the housing 3 can be revolved to reciprocate the plunger 17, and through the medium of the pawl teeth 22, rotate the ratchet block 24. The springs 18 and 20 are adapted to return the plunger to its normal position to obtain a fresh grip upon the teeth 23.

Our wrench is made of strong and durable metal, and while in the drawings forming a part of this application, there is illustrated the preferred embodiments of our invention, we would have it understood that the details of construction can be varied or changed as to the shape, proportion and manner of assemblage without departing from the spirit of the invention.

Having now described our invention, what we claim as new, is;—

1. A wrench of the type described, embodying a plate, a housing carried thereby, 5 a tubular handle carried by said housing, a rod arranged in said handle and extending into said housing, a crank carried by the outer end of said rod, a ratchet actuating head carried by the opposite end of said rod 10 within said housing and having a cam path, a plunger arranged in said housing and adapted to engage the cam path of said head, a toothed pawl carried by said plunger, a ratchet block revolubly mounted upon said 15 plate and adapted to be engaged by said pawl, a cover plate inclosing said ratchet block and said plunger, said ratchet block having an opening formed therein for a nut or drill socket, and means arranged within 20 said housing and upon said plate for normally holding said plunger in engagement with said ratchet actuating head, substantially as described.

2. A wrench of the type described, embodying a plate, a housing carried by said 25 plate, a tubular handle carried by said housing, a rod arranged in said handle and extending into said housing, a ratchet actuating head connecting with said rod, a spring

pressed plunger arranged within said housing and normally engaging said ratchet actuating head and adapted to be reciprocated thereby, a pawl carried by said plunger, a ratchet block revolubly mounted upon said plate and adapted to be engaged by said 35 pawl, a cover plate inclosing said ratchet block and said plunger, and means carried by said rod for rotating said ratchet actuating head.

3. A wrench of the type described embodying a plate, a tubular handle carried 40 thereby, a rod arranged in said handle, a ratchet actuating head carried by said rod, a plunger arranged upon said plate and adapted to be reciprocated by said head, a 45 ratchet block revolubly supported by said plate and adapted to be rotated by said plunger, a cover plate for inclosing said ratchet block and said plunger, and means carried by said rod for rotating said rod and 50 the head carried thereby.

In testimony whereof we affix our signatures in the presence of two witnesses.

ALEX FRESKO.
BELA W. FRESKO.

Witnesses:

JOHN KERR,
L. D. ALLEN.