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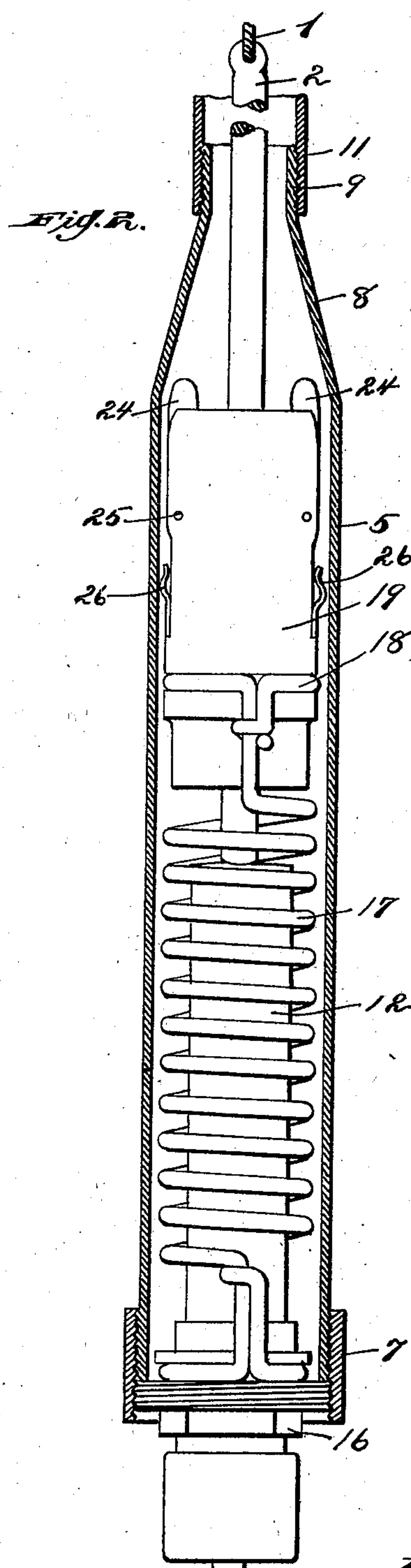
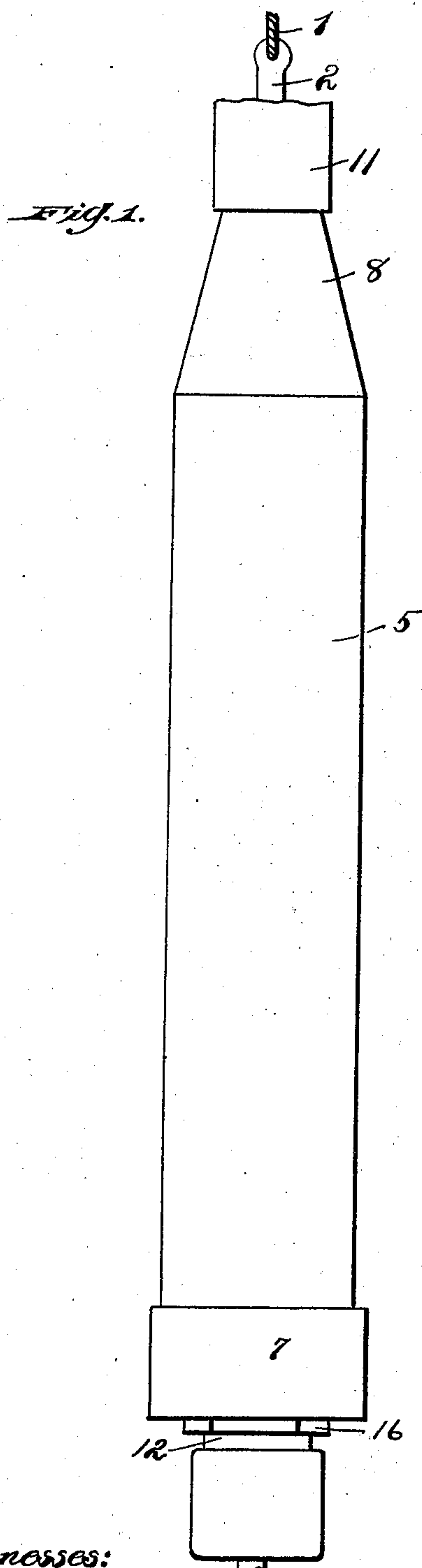
Patented May 20, 1902.

A. M. HENDERSHOT.
TOOL FOR OIL WELLS OR ARTESIAN WELLS.

(Application filed Aug. 22, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:

J. C. Appleman.
M. Hunter

Inventor

Amos M. Hendershot

By O. W. Lewis

Att'y.

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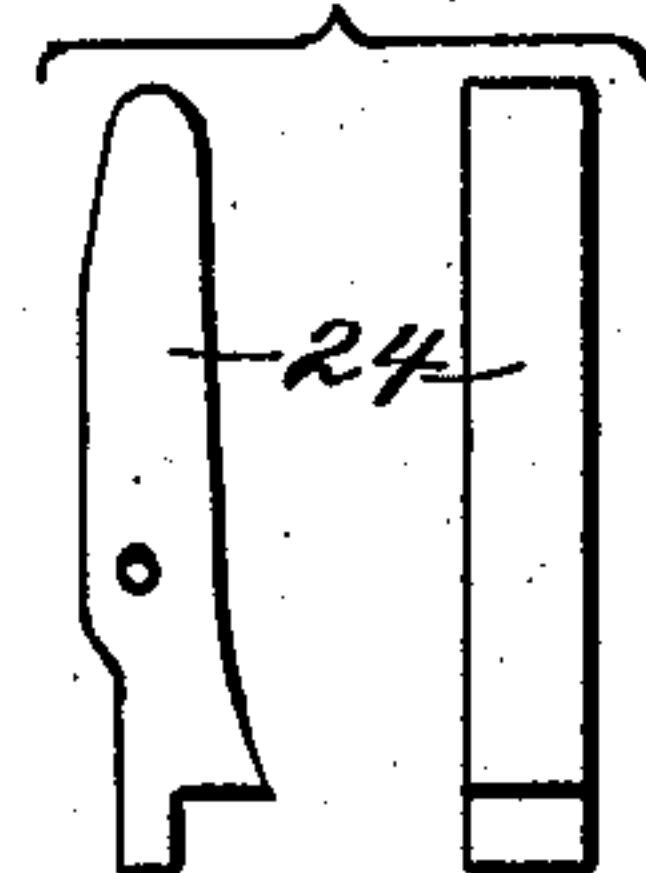
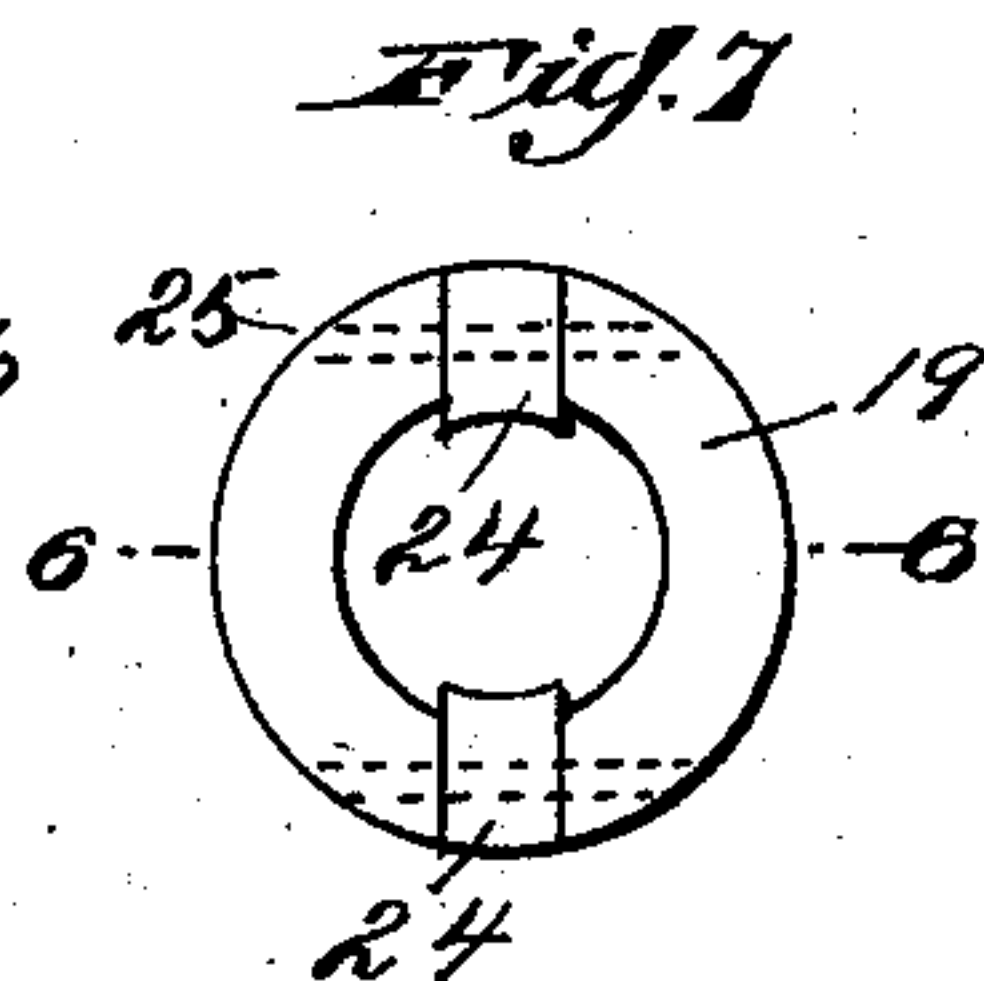
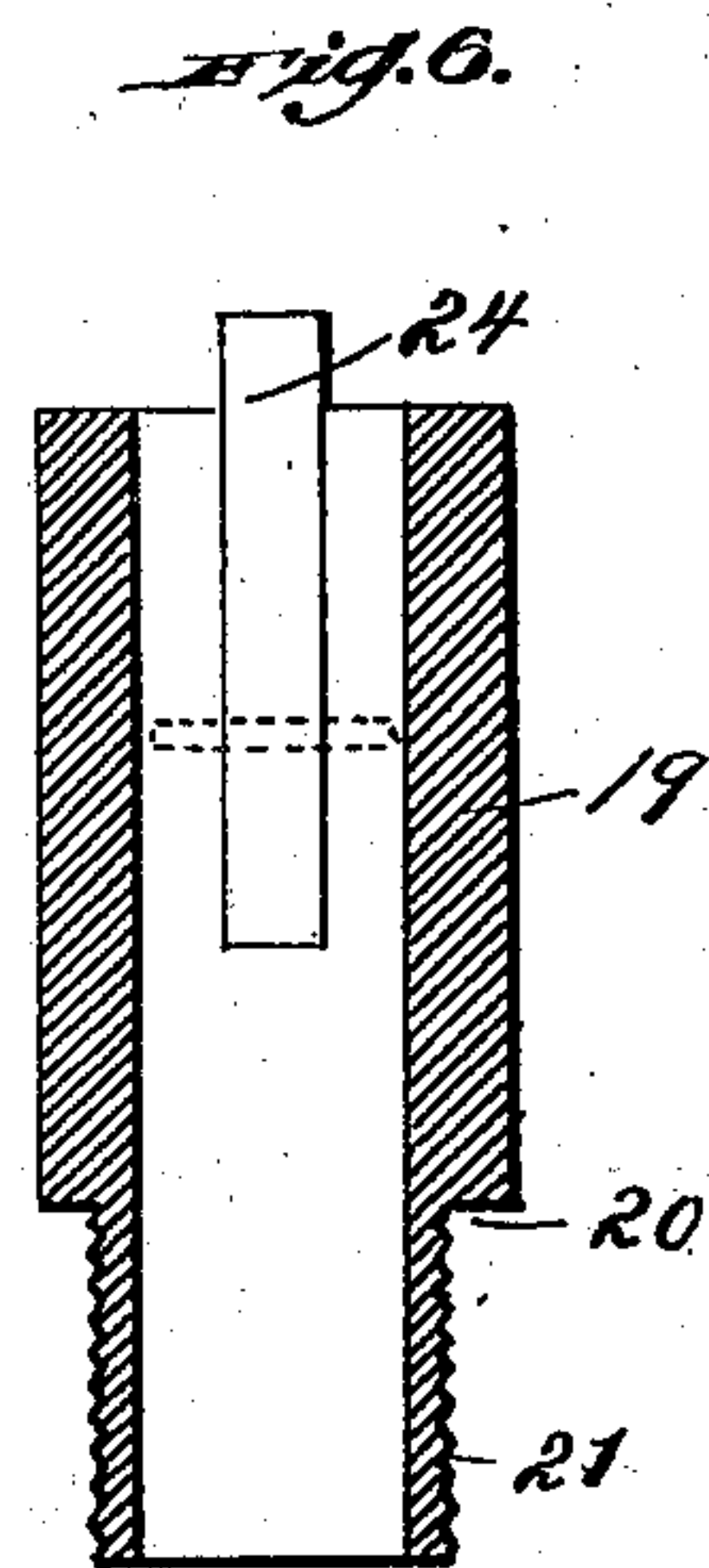
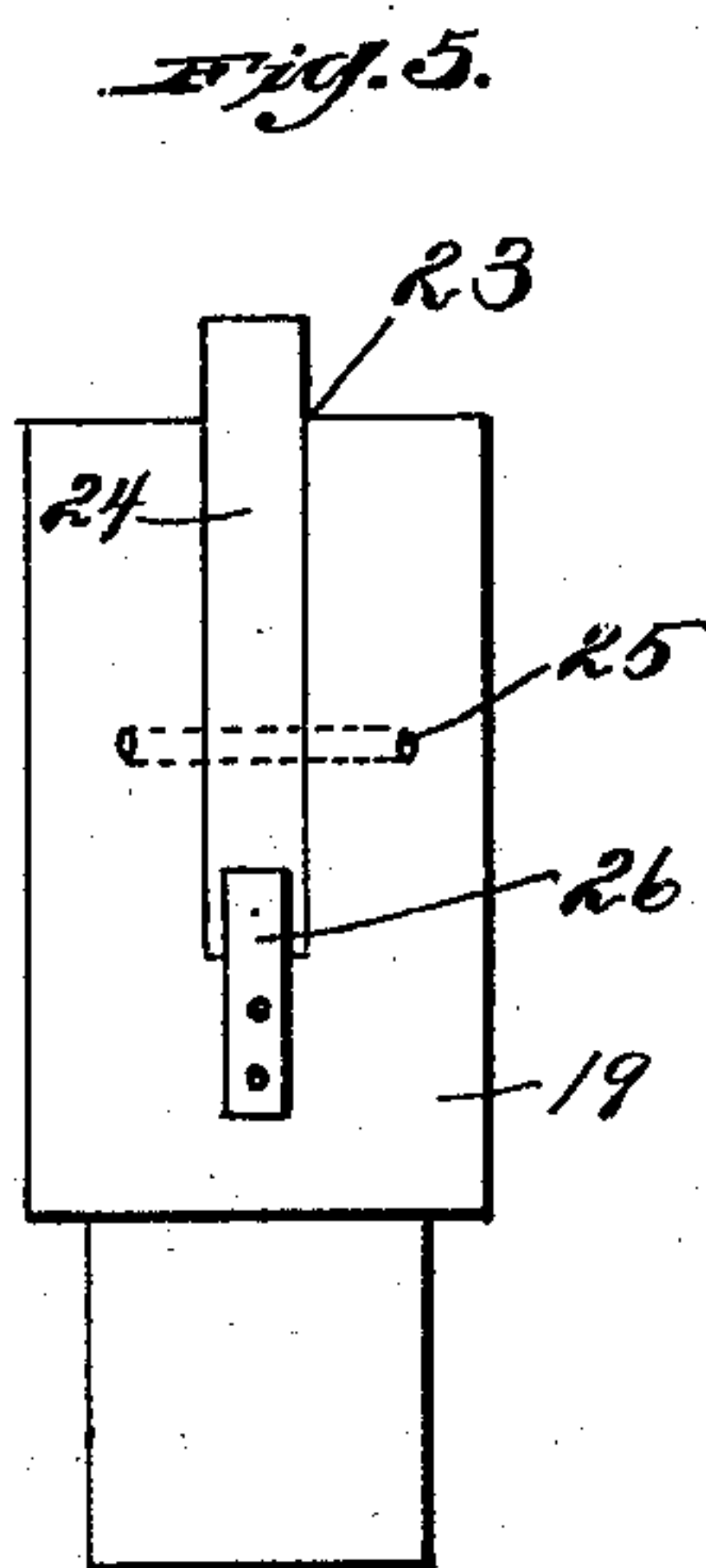
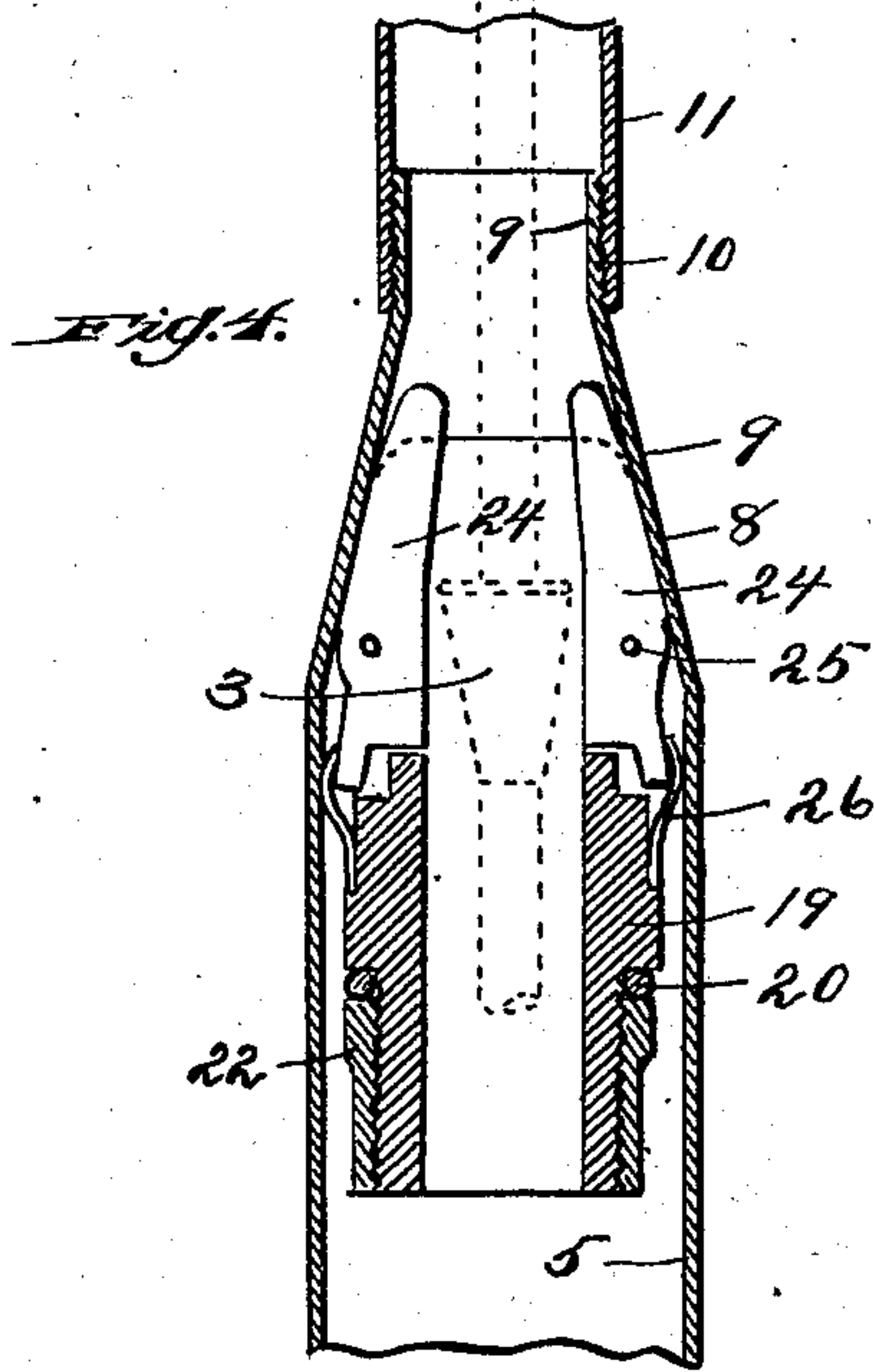
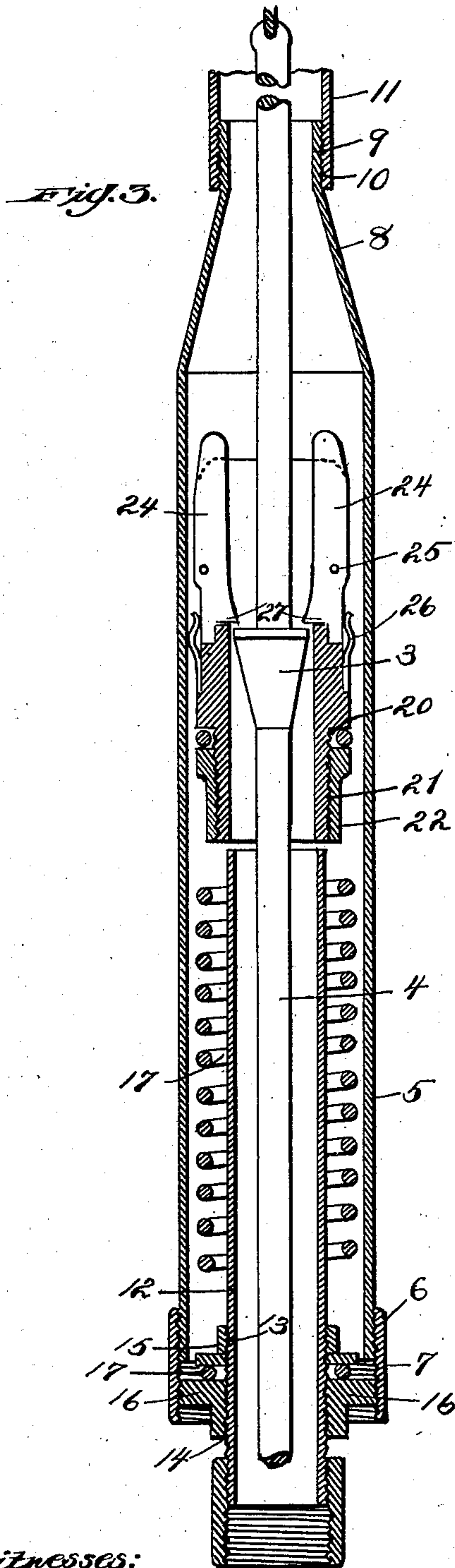
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(Application filed Aug. 22, 1901.)

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2 Sheets—Sheet 2.



Witnesses:

J. P. Appleman,
M. Hunter

Inventor
Amos M. Hendershot
By *W. Lewis*
Jetty.

UNITED STATES PATENT OFFICE.

AMOS M. HENDERSHOT, OF GRAYSVILLE, OHIO, ASSIGNOR OF TWO-THIRDS
TO W. H. ERNST AND D. W. STEVENSON, OF MARIETTA, OHIO.

TOOL FOR OIL-WELLS OR ARTESIAN WELLS.

SPECIFICATION forming part of Letters Patent No. 700,328, dated May 20, 1902.

Application filed August 22, 1901. Serial No. 72,864. (No model.)

To all whom it may concern:

Be it known that I, AMOS M. HENDERSHOT, a citizen of the United States of America, residing at Graysville, in the county of Monroe and State of Ohio, have invented certain new and useful Improvements in Tools for Oil-Wells and Artesian Wells; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain new and useful improvements in tools for oil-wells and Artesian wells, and has for its object the provision of novel means whereby the working plunger is drawn downwardly at each movement to the lowest point in the barrel, and thereby the working plunger given its full stroke or movement desired without loss of motion.

Another object of the invention is to construct a tool that will be arranged within a casing and firmly retained therein, but one that may be easily removed from the casing and will allow the plunger to be automatically released, when it is desired to remove the same.

The invention still further aims to construct a device of this character wherein a spring is connected to the rod or stem that operates the working plunger, this spring being used for the purpose of maintaining a tension at all points of motion on the wire cable or sucker-rod, thereby preventing the parting of any screw joint or connection, in any part of the pumping apparatus in the well.

The invention has for its still further object to provide a device of this class that will be extremely simple in construction, strong, durable, and comparatively inexpensive to manufacture; furthermore, one that will be highly efficient in its operation.

With the above and other objects in view the invention consists in the novel combination and arrangement of parts to be hereinafter more fully described, and specifically pointed out in the claims.

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

wherein like numerals of reference indicate corresponding parts throughout the several views, in which—

Figure 1 is a side elevation of my improved device. Fig. 2 is a vertical sectional view of the casing, showing the interior arrangement of the parts. Fig. 3 is a vertical sectional view of my improved device. Fig. 4 is a similar view of the upper portion of the device, showing the position when it is desired to release the plunger. Fig. 5 is a side elevation of the upper casing, showing one of the spring-pressed jaws. Fig. 6 is a vertical sectional view thereof, taken on the line 6 6 of Fig. 7. Fig. 7 is a top plan view thereof. Fig. 8 is a side and front elevation of one of the spring-pressed jaws.

In the drawings, the reference-numeral 1 indicates a cable, which may be operated in any suitable manner and is attached to the plunger-rod 2, carrying a cone-shaped enlarged portion 3, and a lower extension 4 operating in the casing.

The reference-numeral 5 indicates a cylindrical outer casing carrying at its lower end screw-threads 6, adapted to receive the interior screw-threaded sleeve 7. The upper end of said casing 5 is cone-shaped, as shown at 8, carrying an upward extension 9, said upward extension having exterior screw-threads, as shown at 10, to receive the tubular casing 11.

The reference-numeral 12 indicates an inner tubular casing, which is likewise interiorly screw-threaded, as shown at 14, to receive a collar 15 and a screw-threaded collar 16, also attached to the interior casing 12. Between said collars 15 and 16 is interposed a coil-spring 17, encircling the casing, extending upward beyond said casing, the upper end of said coil-spring being attached at 18 to the interior upper casing 19, carrying a contracted portion 20, the latter portion being screw-threaded, as shown at 21, to receive a collar 22, abutting against the looped end of the spring, as shown at 20. The said interior upper casing is provided with suitable openings 23 to receive spring-pressed jaws 24, which are pivotally secured thereto, as shown at 25, and retained in their normal position by means of springs 26. The said jaws 24 carry inwardly-extending shoulders 27,

which serve to retain the enlarged cone-shaped portion 3 in position.

The operation of my device is as follows: As the apparatus is raised the spring 17 is expanded and the plunger allowed to operate. When it is desired to remove the plunger automatically, the device is raised to a point where the jaws will come into contact with the cone-shaped portion 8, thereby depressing the upper ends of the jaws inwardly, expanding or opening the jaws at their lower engaging ends, and by this means releasing the enlarged cone-shaped portion 3 and allowing the same to pass upwardly, as shown in dotted lines in Fig. 4.

The many advantages obtained by the use of my device will be readily apparent from the foregoing description, taken in connection with the accompanying drawings, and it will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

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

1. In a device of the character described, an outer casing, an upper and a lower section comprising the inner casing, a spring encircling said lower section and secured to the upper section, a plunger-rod operating through the inner casing, and means carried by the upper section for engaging said plunger-rod, said means being operated by the outer casing for automatically releasing said plunger-rod, substantially as described.

2. In a device of the character described, an outer cylindrical casing carrying a cone-shaped portion at its upper end, an upper and a lower section comprising the inner casing mounted within the outer casing and having a coil-spring secured to each, spring-pressed jaws carried by the upper end of the inner casing, and a plunger-rod carrying a cone-shaped enlarged portion for engagement with said jaws, substantially as described.

3. In a device of the character described, the combination of an outer cylindrical casing carrying a cone-shaped portion at its upper end, an upper and a lower section comprising

the inner casing, a coil-spring surrounding said lower inner casing connected at the lower portion thereof, and extending to the lower portion of the outer casing, the other end of said spring being rigidly secured to the lower portion of the upper inner casing, spring-pressed jaws secured in said upper inner casing, and a plunger-rod carrying a cone-shaped enlarged portion for engagement with said jaws, substantially as set forth.

4. In a device of the character described, an outer casing having an inner casing secured therein, the inner casing comprising two sections having a spring connected to each, a plunger-rod operating through the inner casing, spring-pressed jaws carried by one of said sections, and means carried by the plunger-rod for engagement with said jaws, said jaws being actuated by said outer casing for releasing the plunger-rod, substantially as described.

5. The combination with a plunger-rod operating through an outer casing, of an inner casing in the outer casing and through which the plunger-rod operates, the inner casing comprising two sections surrounded by a spring the ends of which are secured to said sections, means carried by one of said sections for engagement with the plunger-rod, said means being operated by the outer casing for releasing the plunger-rod, substantially as described.

6. In a device of the character described, an outer casing surrounding an inner casing, with a plunger-rod operating through both, the inner casing comprising a lower section secured to the outer casing, and an upper section movable with the plunger-rod, a spring having its ends secured to the said sections, means carried by the upper section for engagement with the plunger-rod, the said means being actuated by engagement with the outer casing, substantially as described.

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

AMOS M. HENDERSHOT.

Witnesses:

JAS. M. BAKER,
H. H. MILHOAN.