

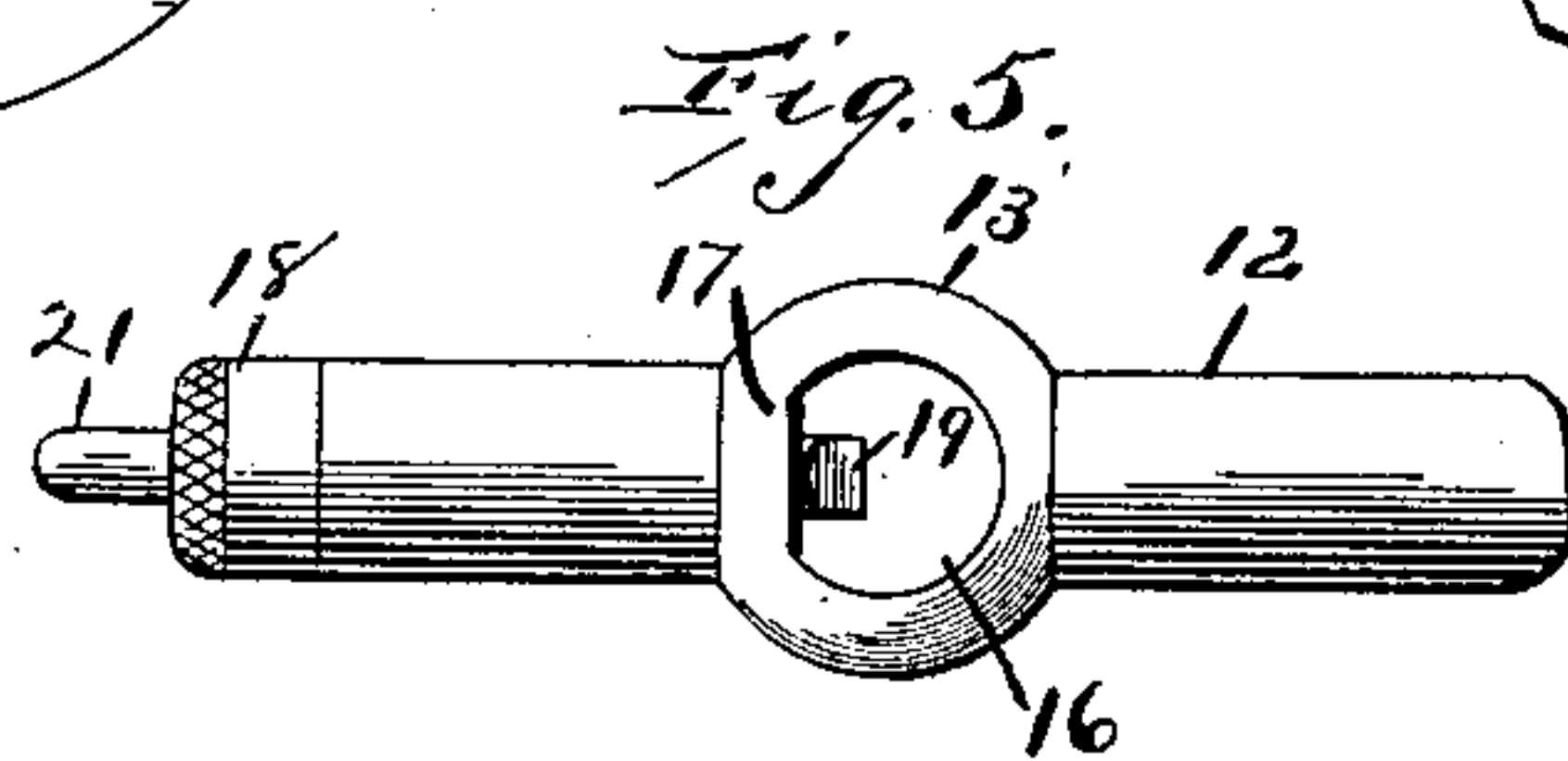
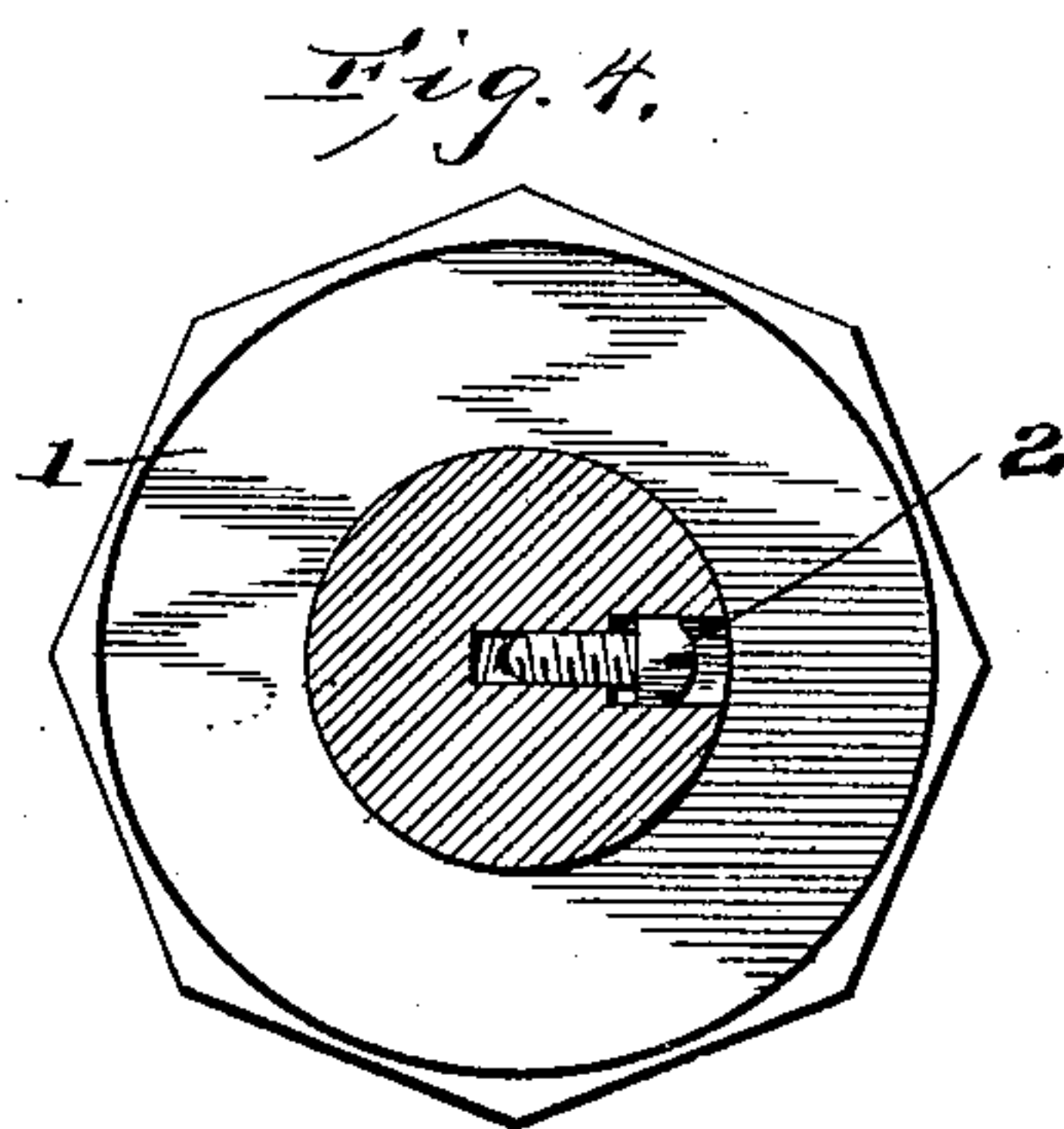
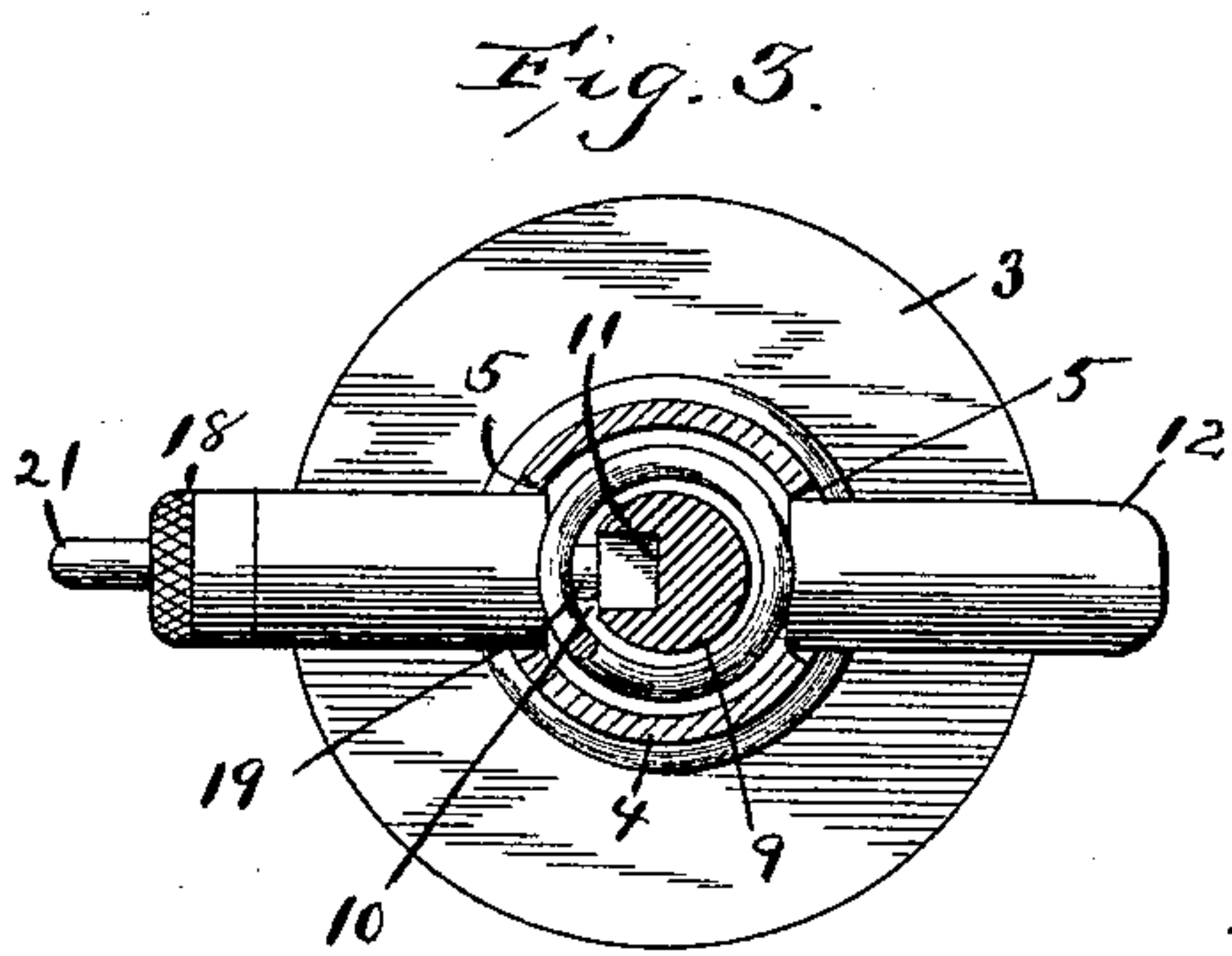
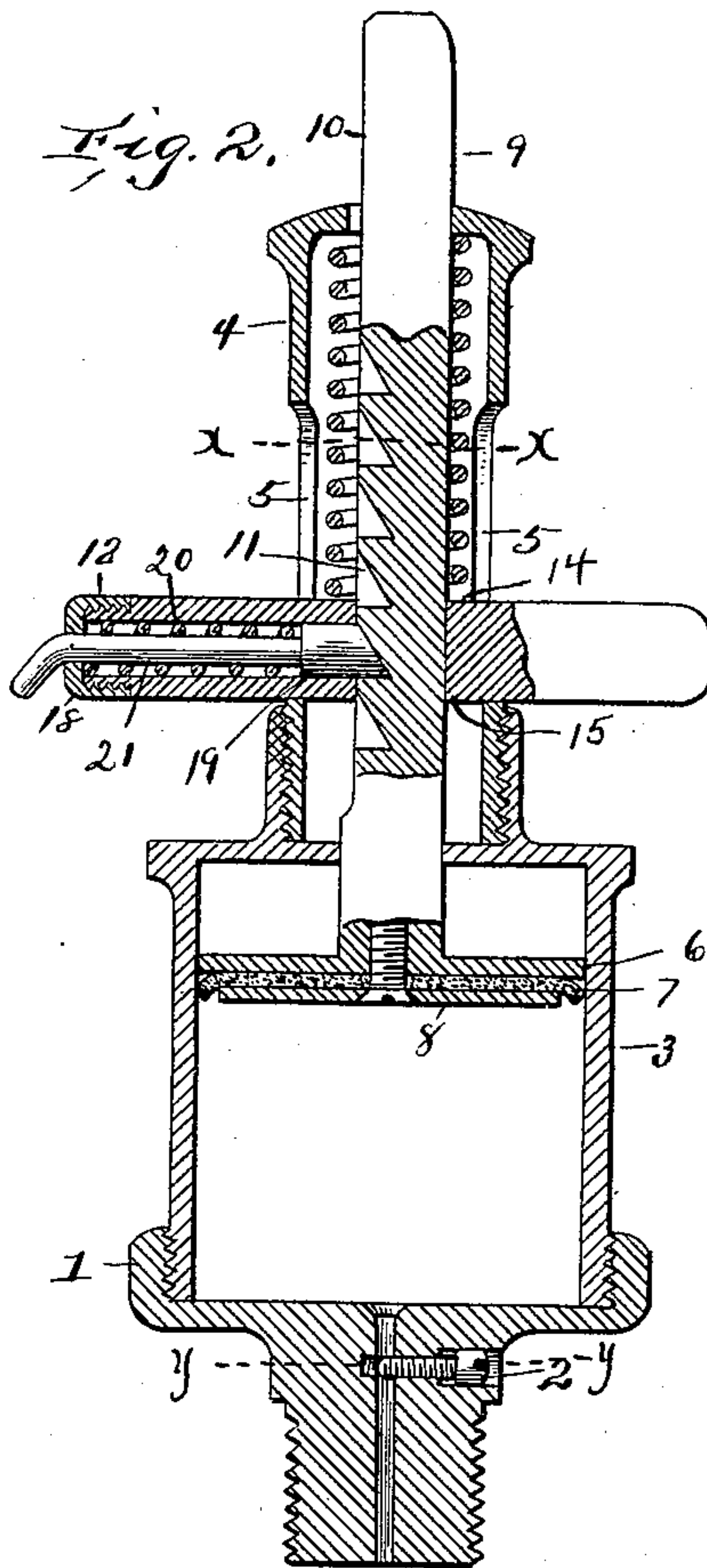
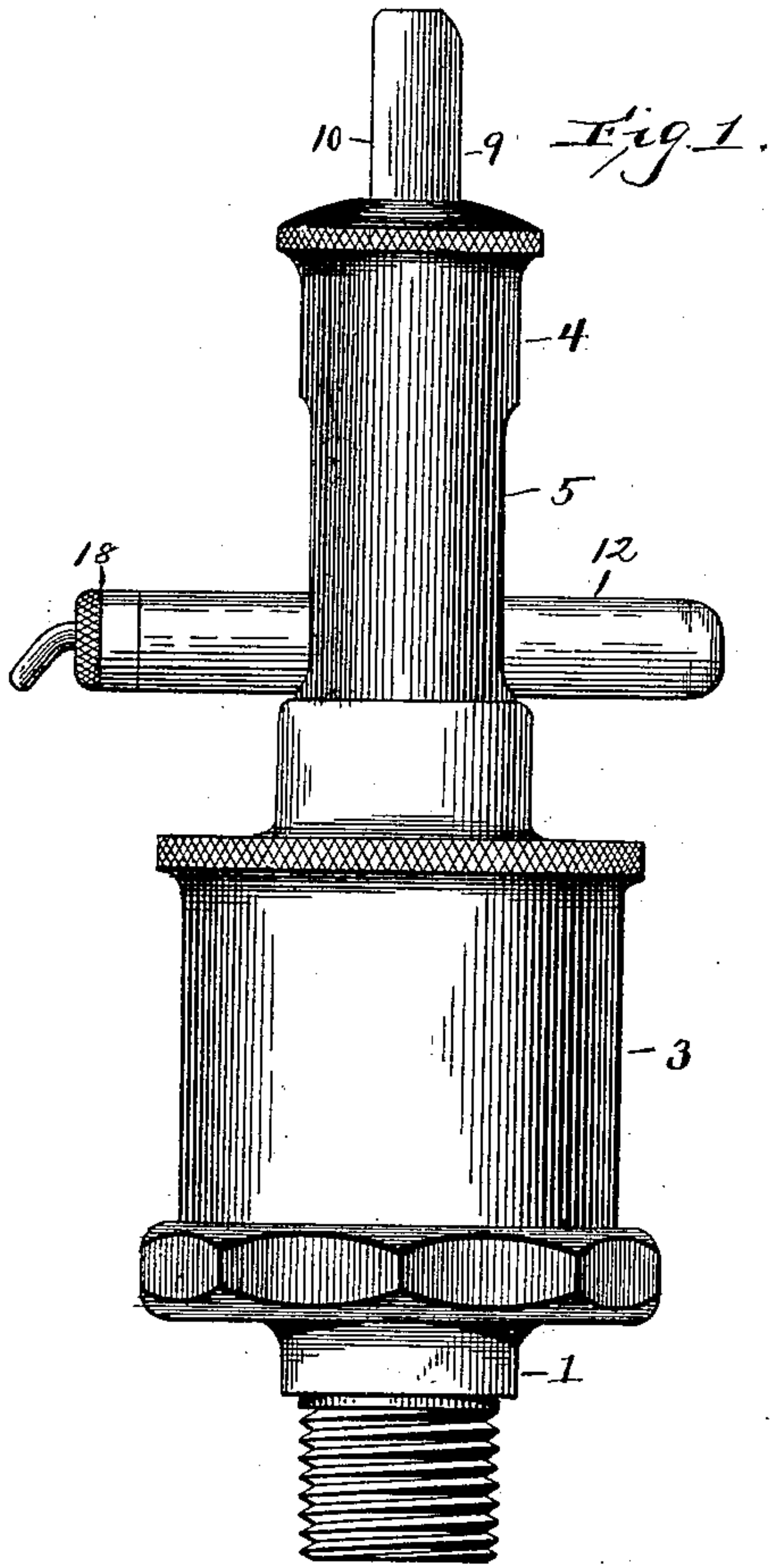
No. 606,897.

Patented July 5, 1898.

W. K. RICHART.
COMPRESSION LUBRICATION CUP.

(Application filed Oct. 22, 1897.)

(No Model.)



Witnesses
H. H. Edwards Jr.
S. B. Warner.

Inventor
W. K. Richart
By Glascocks & Co.
Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM K. RICHART, OF SCRANTON, PENNSYLVANIA.

COMPRESSION LUBRICATION-CUP.

SPECIFICATION forming part of Letters Patent No. 606,897, dated July 5, 1898.

Application filed October 22, 1897. Serial No. 656,056. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM K. RICHART, a citizen of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Compression Lubrication-Cups; 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.

My object is the provision of a compression lubricating-cup of improved construction which will be adapted to maintain the lubricant under compression in a novel manner and will be capable of a variety of desired adjustments to insure the proper compression and feed of the lubricant.

Having the foregoing and other objects in view, the invention consists of a compression lubricating-cup having an improved plunger or compressor and novel means for locking the same at predetermined points before compression of the lubricant, together with a peculiar and improved arrangement of elements whereby after initial compression of the lubricant the latter is maintained under compression and hence kept applied to the bearing or other part to be lubricated for quite a period of time.

The invention also consists of certain improved features and novel combinations of parts, appearing more fully hereinafter.

In the accompanying drawings, Figure 1 is a side elevation of my complete invention; Fig. 2, a sectional elevation thereof; Fig. 3, a sectional plan view taken on the line $x x$ of Fig. 2; Fig. 4, a cross-section taken on line $y y$ of Fig. 2, and Fig. 5 a detail view of the plunger-actuator.

The cup-base is shown at 1, the same being of the usual construction with the exception that there is provided a feed-regulating screw 2, whose tip is adapted to partially or wholly close the feed-duct, so that the proper feed to the bearing or other part to be lubricated can be obtained. The lubricant-cup 3 is threaded into its base, as usual, and a cap 4 is threaded into a boss at the top of the cup, and the cap has diametrically-disposed vertical guide-slots 5.

The piston 6 of my improved plunger or

compressor snugly fits the cup 3; but it is preferable to employ a leather washer 7, held to the plunger by a screw and washer 8, in order to insure proper compression on all the lubricant contained in the cup. The plunger-stem 9 works loosely through the top of the cup and the cap, and it is on one side provided with a flattened portion 10, which has notches 11.

The plunger-actuator is shown in detail in Fig. 5, and consists of a cylindrical bar 12, having a circular enlargement 13 at its central portion, which is of sufficient diameter in one direction to snugly yet easily fit the cylindrical interior of the cap, but has flat diametrically-disposed portions 14 and 15, so that its diameter at these points is only as great as the guide-slots 5. This construction is employed so that the enlargement can be passed through the guide-slots, and when the actuator is turned the greater diameter of the enlargement will lie horizontally, and thus prevent the actuator from coming out of the slots. The enlargement has an aperture 16, having a flat portion 17, which fits against the flat portion of the plunger-stem, and thus prevents the latter from turning. The actuator is hollowed out at one end and provided with a screw-threaded cap 18.

The numeral 19 designates a locking-catch located in the hollowed end of the actuator and having a beveled face adapted for reception in the notches of the plunger-stem, and the stem 20 of this catch works loosely through the cap 18, being provided with a handle on its outer end. A coil-spring 21, encircling the stem 20, tends to urge the catch into engagement with the notches of the plunger-stem and lock the latter against upward movement. An actuating coil-spring 22 lies within the cap and encircles the plunger-stem, and also bears against the upper flat face 14 of the enlargement, and this spring keeps the actuator urged downwardly at all times.

The operation is as follows: The lubricant having been previously introduced into the lubricant-cup, the actuator is first drawn upward against the action of the actuating-spring, and the plunger is then forced downwardly by hand until the lubricant has been suitably compressed, whereupon the locking-catch again locks the plunger. Upon releasing the actuator the actuating-spring will by

its downward expansion cause the plunger to be constantly maintained in contact with the lubricant, and hence the supply thereof to the bearing or other part to be lubricated will be constant and even until the actuator reaches the bottoms of the guide-slots, when of course the operation will have to be repeated. The actuating-spring also prevents any twisting of the actuator, and hence the latter cannot slip out through the slots.

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

1. In a compression-lubricator, the combination with a lubricant-receptacle, of a movable compressor having a stem provided with notches, a hollow cap located on the receptacle and having opposite guide-slots, the stem of the compressor entering the interior of said cap, an actuator having an aperture adapted to receive said stem, the ends of the actuator passing through the guide-slots of the cap, a releasable locking-catch carried by the actuator and adapted to engage the notches to lock the compressor, a spring bearing at one end on the actuator and at the other against an inner portion of the cap.

2. In a compression-lubricator, the combination with a lubricant-receptacle, of a movable compressor having a stem provided with notches, a hollow cap located on said receptacle and having opposite guide-slots, an actuator having an aperture adapted to receive the stem of the compressor, the ends of said actuator passing through the guide-slots of the cap, one of the said ends being hollow, a spring-actuated locking-catch located in said hollow end, the end of said catch being adapted to engage the notches to lock the compressor, a spring bearing at one end against said actuator and at the other end against an inner portion of the cap.

3. In a compression-lubricator, the combination with a lubricant-receptacle, of a movable compressor having a stem, the stem of the compressor being provided on one side with a flattened surface and notches located in said flattened surface, an actuator having

an aperture adapted to receive said stem, one side of the said aperture being flattened and adapted to come opposite the flattened surface of the compressor-stem and thus prevent the said stem from revolving, a releasable locking-catch carried by the actuator and adapted to engage the notches of the stem and lock the compressor and a suitable support for the actuator.

4. In a compression-lubricator, the combination with a lubricant-receptacle, of a lubricant-compressor having a stem provided with notches, a movable actuator, guiding means for said actuator, a releasable locking-catch carried by the actuator and adapted to engage the notches aforesaid, and a spring adapted to urge the actuator and maintain compression of the lubricant by the compressor.

5. In a compression-lubricator, the combination with a lubricating-cup, of a cap secured thereto having guide-slots a lubricant-compressor movable in the cup and having a notched stem movable in the cap, an actuator movable in the slots, a spring-actuated releasable locking-catch carried by the actuator, and an actuating-spring within the cap and urging the actuator to maintain the compression of the lubricant by the compressor.

6. In a compression-lubricator, the combination with a lubricant-cup, of a hollow tubular cap having opposite guide-slots, an actuator movable in said slots and having an apertured enlargement of substantially the same diameter in one direction as the interior of the cap and cut away or flattened in another direction to be of less width than the slots, thereby permitting the insertion of said enlargement in the cap, a lubricant-compressor having a stem fitted loosely in the enlargement, a releasable locking-catch for securing the stem to the actuator, and automatic means for urging the actuator.

In testimony whereof I affix my signature in presence of two witnesses.

W. K. RICHART.

Witnesses:

JAS. W. CLARK,
G. G. WINANS.