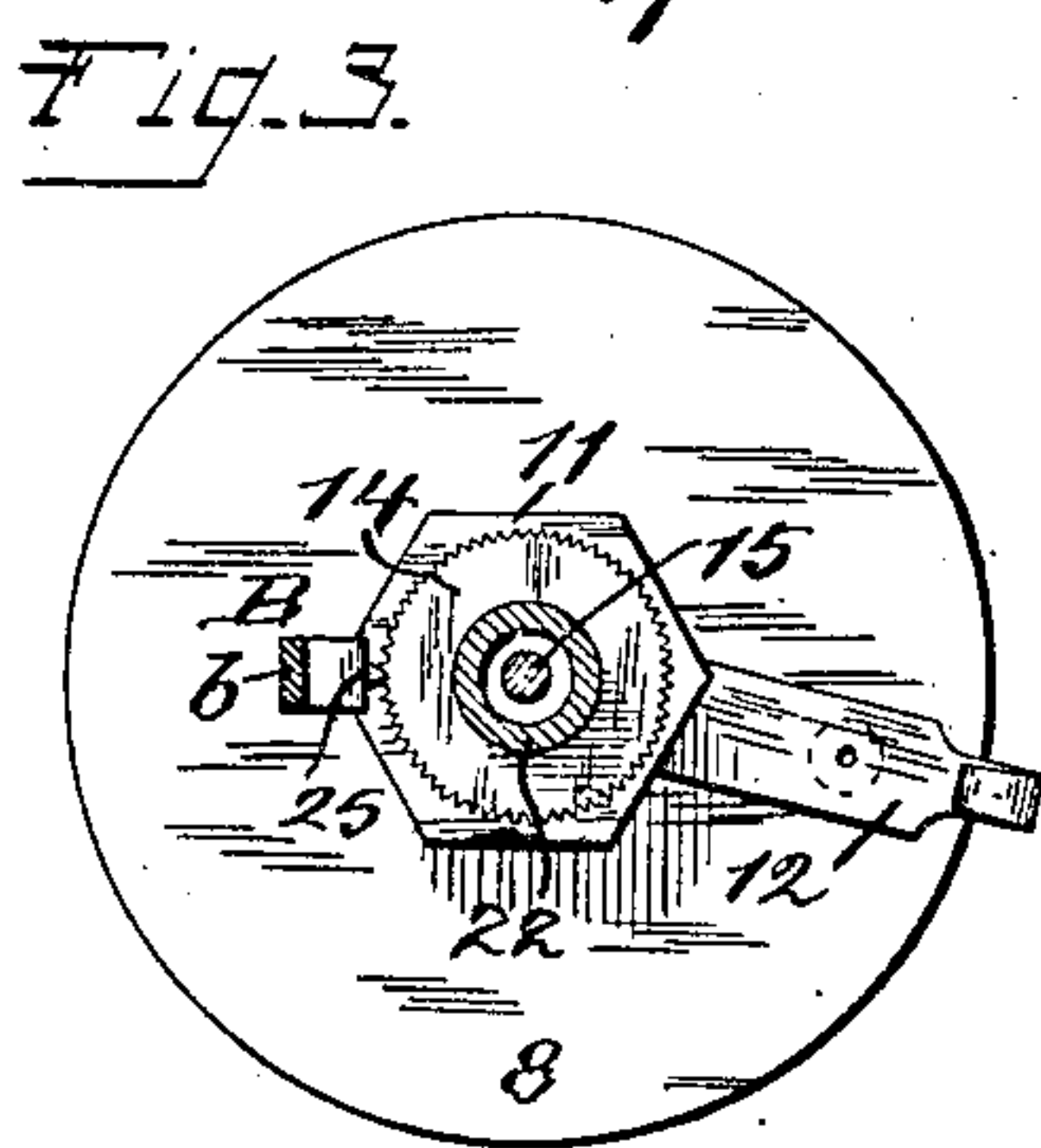
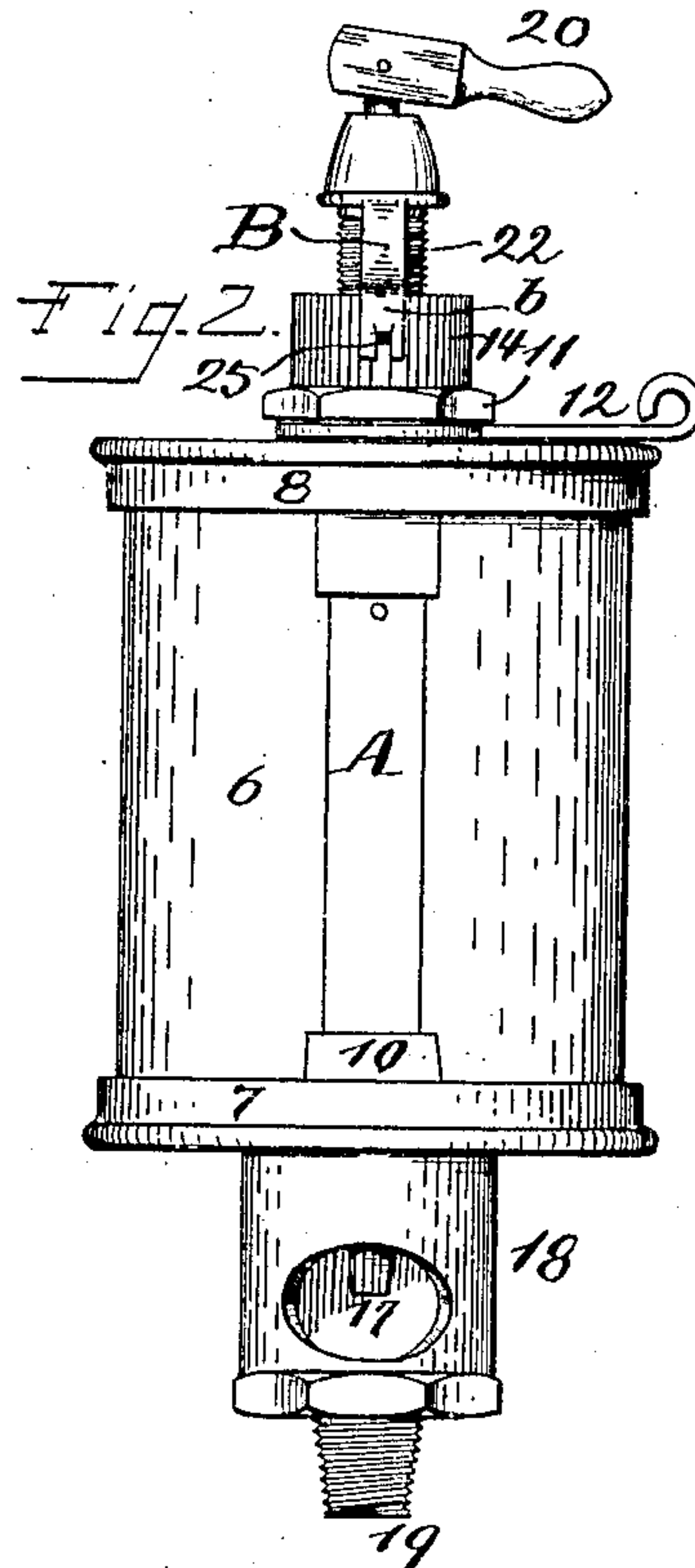
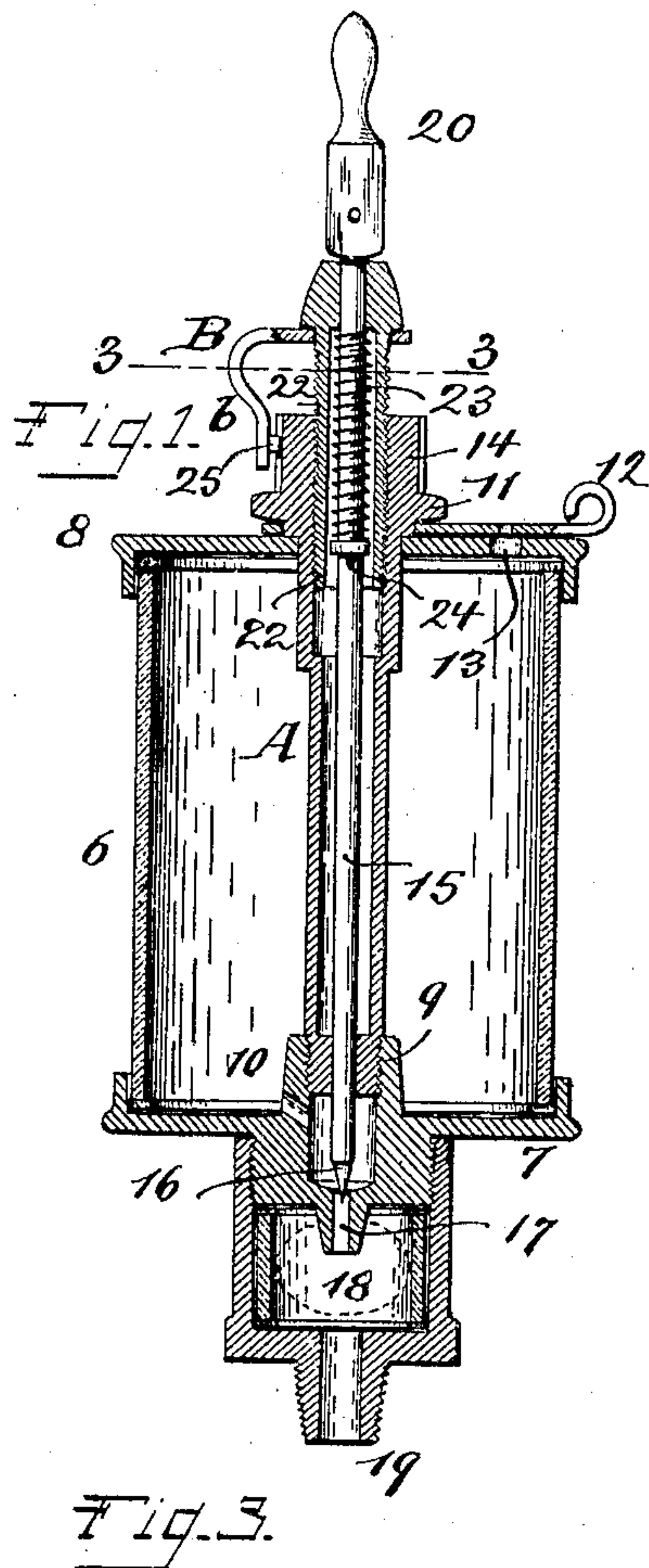


No. 882,535.

PATENTED MAR. 17, 1908.

J. POWELL.
VALVE LOCKING MEANS.
APPLICATION FILED JAN. 7, 1907.



Witnesses.
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UNITED STATES PATENT OFFICE.

JAMES POWELL, OF CINCINNATI, OHIO, ASSIGNOR TO THE WILLIAM POWELL CO., OF CINCINNATI, OHIO, A CORPORATION OF OHIO.

VALVE-LOCKING MEANS.

No. 882,535.

Specification of Letters Patent.

Patented March 17, 1908.

Application filed January 7, 1907. Serial No. 351,052.

To all whom it may concern:

Be it known that I, JAMES POWELL, a citizen of the United States, and residing at Cincinnati, Hamilton county, State of Ohio, have invented certain new and useful Valve-Locking Means; and I do declare the following to be a clear, full, and exact description of the invention, attention being called to the accompanying drawing, with the reference characters marked thereon, which forms also a part of this specification.

This invention relates to means, operating frictionally for locking in adjusted position, valves of such lubricators which feed by gravity and are used for oiling journals and bearings, also for such valves which are used in connection with devices for supplying oil or other fluids to spray nozzles, jets etc.

It constitutes an improvement on the device shown in Patent No. 408,927 issued to me on August 13th, 1889.

The object of this present invention is to produce a compact, efficient and cheap device for the purpose named, and whereby the rate of discharge of oil may be easily and quickly adjusted and whereby thereafter the regulating parts (valve) may be securely held in adjusted position against accidental disturbance while the lubricator is in use.

The invention consists of the particular construction and arrangement of parts as shown and described and whereby the construction is greatly simplified by reducing the number of parts required, to the smallest possible number consistent with efficiency which is accomplished by using existing structural parts of the lubricator for such purpose.

In the following specification and particularly pointed out in the claims at the end thereof will be found a full description of the invention, together with its operation, parts, and construction, which latter is also illustrated in the accompanying drawing, in which:—

Figure 1, shows in vertical central cross-section, a lubricator provided with the special features contemplated by my invention. Fig. 2, is an elevation thereof. Fig. 3, is a top-view of the oil-cup with parts above the same removed on a sectional line indicated by 3—3, in Fig. 1.

This invention is shown as applied to an oil-cup of a certain particular type and which consists of a glass shell 6, a lower head,

or bottom 7 and a top 8, which three members are held in their proper relative position to form the cup, by a tie-post A. This tie-post is of a certain peculiar construction. At its lower end this post terminates in a screw-threaded portion 9, which engages with a correspondingly threaded socket 10, into which it is tapped and which projects upwardly from the inner side of bottom 7. At its upper end and above top 8, this post is increased diametrically to form an integral shoulder or collar 11 which, when said post is screwed into socket 10, bears on said top and serves to hold the assembled parts of the oil-cup in place. At its circumference this collar is shaped to form a nut to facilitate manipulation of the parts and it may also serve to hold a swinging cover 12 in place when such is used to close the fill-opening 13. Above this collar, post A, is again decreased diametrically and forms a cylindrical head 14, which is provided with vertical serrations in its side. This tie-post serves also in connection with and forms part of the means whereby the oil-controlling valve is held in position and whereby it is adjusted and locked in adjusted position. For such purpose it is hollow and contains valve-stem 15 which is provided at its lower end with valve 16, designed to control passage through an outlet-opening 17 by which the oil-cup communicates with sight feed-chamber 18 the stem and valve being manipulated accordingly within the post. The final discharge takes place at 19. Valve-stem 15 is held within this post A, by means of an intermediate carrier 22, within which it is contained as shown in Fig. 1, and which carrier is held within post A by means of a screw-connection. The valve-stem is capable of an independent manipulation within this carrier 22 in the usual way, by means of a handle 20, for opening and closing the valve, Fig. 1, showing this handle manipulated for opening outlet 17, and Fig. 2 shows it in the closed position. The valve in this case is held in its closed position by a spring 23 contained within carrier 22 and acting against a shoulder 24 on the valve-stem, the motion of this latter being a sliding one in a longitudinal direction.

The position of the valve with reference to outlet 17 may be adjusted by rotation of the member which supports it within the hollow tie-post A. For such purpose the particular

member is fixedly connected at its upper end where it projects above the tie-post, to a lever-arm B, whereby this member, is rotated for the purpose of adjusting the position of the valve above outlet 17 and with reference thereto.

It is desirable that the particular adjustment of the valve by arm B be preserved and held against accidental displacement and for such purpose this laterally extending arm is also continued downwardly as shown at *b*, which part forms a spring and is shaped so that its lower end approaches the serrated side of head 14. At the side of this spring *b* nearest head 14 there is a tooth 25, adapted to contact with this head and to engage yieldingly with one of the serrations therein, thus holding arm B, and the valve-adjusting member thereon in adjusted position.

The serrations being vertical, or parallel to the axis of the rotated member, tooth 25, while sliding over them laterally, may also readily change its position vertically while following the limited longitudinal movement of the adjusted part.

It will be noted that lever-arm B, is permanently and rigidly attached to carrier 22, and no other means, knob or handle, are required for such manipulation. For the purpose of this rigid attachment, this arm is tightly driven over the part to which it is to be connected, and permanently riveted or soldered thereto, thus dispensing entirely with jam-nuts, or other accessory means to fasten the same.

The lever power of arm B which is used for manipulation is a great improvement and advantage over the use of knobs in older constructions which become usually oily and produce a slippery condition when grasped by the engineers hand which renders adjustment difficult.

The extended lever - arm avoids this and overcomes with little effort the frictional resistance presented by the serrations of head 14 to the movement of spring-actuated tooth 25 on the extended lever-arm. This latter being always in contact with these serrations, it is clear that it is also held in all adjusted positions with sufficient security against any accidental disturbance. At the same time the pressure of spring *b* being a yielding one, ready adjustment may be had when arm B, is positively manipulated. For such manipulation this lever is grasped and simply rotated in the desired direction, the positive action readily overcoming the frictional resistance caused by tooth 25 while slipping over the serrations in head 14. This yielding pressure of spring-lever arm B, is due to the peculiar shape of this member and to the material used for the same which is elastic.

The serrations in head 14, being parallel

to the axis of rotation of the member connected to the arm, it is plain that there is no resistance to the limited longitudinal movement which the rotated member undergoes at the same time.

It will now be readily seen that the important features of my invention consist of combining the manipulating and adjusting members, and the two complementary parts of the locking means, with existing parts already present in the lubricator, part of the functions of these members and means being assumed by this tie-post. This consolidation of the parts results in great simplification and economy of construction, reducing the members of the lubricator to the essential parts actually required for manipulation and which parts embody at the same time the means for regulation and adjustment, and for holding this latter. This does away with many accessory parts like jam-nuts, washers, locking and binding nuts otherwise required and also obviates the danger and annoyance of misplacing and losing these parts.

Having described my invention I claim as new:

In a lubricator, the combination of an oil-retainer consisting of a shell and a top and bottom, a hollow tie-post seated in the bottom by means of a screw-connection and extending through shell and top and above this latter where it is diametrically increased to form an integral shoulder which, by bearing against the top, serves to hold the parts of the oil-retainer together, there being also vertical serrations on the outside of the tie-post above this shoulder and a valve-seated outlet near its lower end, a carrier adjustably supported within the upper part of the tie-post, a valve for the seat mentioned which has a stem extending upwardly through the lower part of the tie-post, and through and above the carrier in which latter it is supported so as to have a sliding adjustment with reference to the valve-seat, a handle at the upper end of this stem to manipulate the valve for the purpose of opening or closing the outlet and to control passage of oil there-through and a combined adjusting and locking lever rigidly connected to the upper end of the carrier and shaped to yieldingly engage the serrations in the tie-post and whereby the carrier may be adjusted to regulate the rate of flow through the open outlet and at the same time locked in its adjusted position.

In testimony whereof, I hereunto set my hand in the presence of two witnesses.

JAMES POWELL.

Witnesses:

C. SPENGEL,

C. M. POWELL.