(No Model.)

T. JAMES.

OIL CUP.

No. 542,854. Patented July 16, 1895.

Fig. 1.

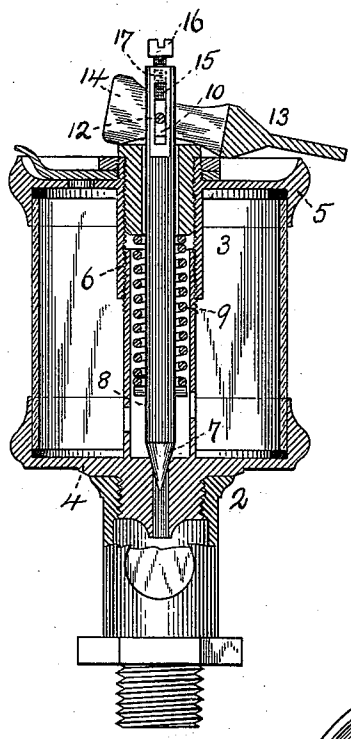


Fig. 2.

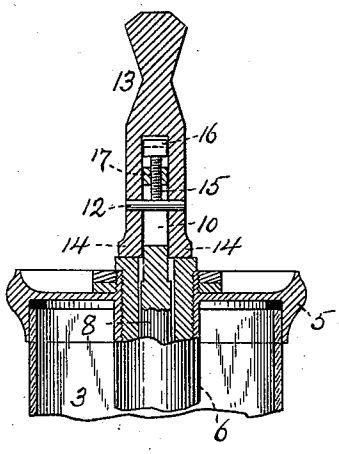


Fig. 3

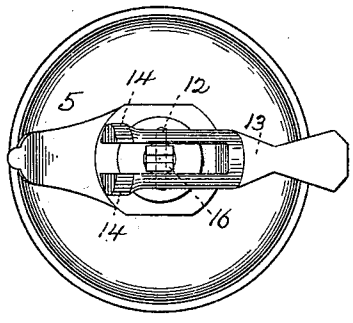
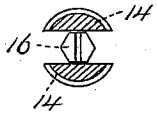


Fig. 4.



WITNESSES.

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UNITED STATES PATENT OFFICE.

THEODORE JAMES, OF NORTH ADAMS, ASSIGNOR TO WILLIAM H. WILKINSON & CO., OF BOSTON, MASSACHUSETTS.

OIL-CUP.

SPECIFICATION forming part of Letters Patent No. 542,854, dated July 16, 1895.

Application filed May 4, 1895. Serial No. 548,122. (No model.)

To all whom it may concern:

Be it known that I, THEODORE JAMES, a citizen of the United States, residing at North Adams, in the county of Berkshire and State of Massachusetts, have invented certain new and useful Improvements in Oil-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, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in oil-cups, particularly that class in which the valve is controlled by a rocking lever.

My invention is embodied in the construction of the valve-lever, whereby the regulating-screw designed to adjust the oil-supply is positively locked when the valve is open or in operation. By means of my invention no check-nuts are required, and the correlation of the valve-lever and the regulating-screw is such that no movement of the latter can take place when the valve is open; in other words, when the proper flow of oil is determined upon no jar or vibration can possibly change the position of said regulating-screw.

The drawings represent, in Figure 1, a vertical sectional elevation of an oil-cup embodying my invention, showing the lever down and the valve closed. Fig. 2 is a view in part of the oil-cup with the lever upright. Fig. 3 is a plan with the lever down. Fig. 4 is a modification.

In said drawings, 2 represents a "sight-feed" cup, so called, with the principal parts arranged after the most approved method. These comprise a transparent oil-reservoir 3, which is mounted in a metallic base or support 4, the lower extremity of which is centrally bored for the discharge of oil and exteriorly screw-threaded to enable the oil-cup to be attached to the machine where the oil is to be supplied. A metallic disk or cap 5 surmounts the oil-reservoir. Centrally of the reservoir is a hollow tube 6, which unites the the cup with the base, and within this tube is located the valve 7 provided with a valve-spindle 8, while a coiled spring 9 serves to hold the valve closed when it is so desired. The valve spindle, in the present instance, is integral with the valve, but the two may be separate pieces, as in general. Said valve-spindle projects some distance above and through the cap and is slotted or apertured in part at 10 to receive a bolt or pin 12 adapted to secure the valve-lever thereto. The latter consists of a swinging handle portion 13 and a bifurcated end comprising a pair of arms 14, which are preferably rounded exteriorly and are flattened upon their inner adjacent portions, in order to fit the upper extremity of the valve-spindle, which is likewise flattened at this point and of a size to readily enter between the forked end or arms of the lever. This arrangement thus permits rocking of the lever, the fulcrum being the top of the cap 5; but the lever, the valve, and the valve-spindle are all united as one piece, these elements being axially movable, if desired.

In connection with the valve-lever and the valve-spindle is a regulating mechanism, in the present instance in the form of a screw 15, headed at 16. This screw is arranged to engage a screw-threaded hole 17, which is longitudinally bored through the end of the spindle. Thus, when the screw is in position the body portion extends through more or less into the slot 10, while the head is clasped between the arms of the lever.

From the above description it will be understood that the lift of the valve can be regulated by the aid of the screw 15 for the following reasons: The fulcrum of the lever is on the cap. Now, should the screw be advanced inwardly until it bears against the fastening-bolt 12, the lever when moved from the horizontal at once lifts the valve and greater movement is imparted than when the screw is retracted. In this latter event the lever must be rocked until the bolt contacts against the end of the screw and a less movement of the valve necessarily occurs. It is to be understood that no rise of the valve can take place until the bolt, which is free to reciprocate in the slotted end of the valve-spindle, is

given a bearing or engages with the screw 15, which constitutes a portion of said spindle.

To avoid the use of check-nuts, which are liable to become loosened through jars or vibrations of the moving machinery, is one of the objects of my invention. It will be observed that no check-nuts are employed, and, furthermore, that the oil-feed is controlled entirely by aid of the screw 15. In order to positively lock this regulating device, and thus avoid any disturbance of the oil-supply when once regulated, I have made the dimensions of the head 16 such that the opposite or corresponding sides of any polygon shall just be able to enter the space between the arms of the lever. Thus it will be understood that the adjustment can be regulated by varying the number of the faces on the polygonal head of the screw 15—that is, by increasing the number the screw may be given a fraction of a turn and still be in position to be locked by the lever. Hence, when the valve-lever is upright the arms have clasped the polygonal head of the regulating-screw and no vibration can disturb said screw. Moreover, the valve, valve-spindle, and valve-lever, together with the screw 15, are now interlocked and all move as a unit, and, whether these various elements are moved axially or not, no change in the feed can take place until the lever is thrown down. When this act occurs the valve is closed. The screw 15 may then be adjusted to alter the oil-supply, which can be increased or diminished as circumstances dictate.

In order to flush the cup or to allow a full stream of liquid to flow from the reservoir the valve may be lifted from its seat by a direct pull on the valve-lever when it is in the position shown in Fig. 2, or the lever may be held temporarily at an angle of forty-five degrees or thereabout, in which position the corners of the arms rest on the cap and the valve is then wide open.

What I claim is—

1. A valve operating device comprising a valve having a valve spindle slotted at one end, a valve lever secured to said spindle by a bolt movable in said slot, and means to regulate the movement of the bolt in the slot to determine the extent of the movement of the valve, substantially as explained.

2. In combination with a fluid reservoir, a valve having a valve spindle slotted at one end, a rocking valve lever secured to the spindle by a bolt movable in the spindle slot, and a regulating device which is positively clasped by the valve lever at stated times, substantially as set forth.

3. The combination with an oil cup, a spring actuated valve, a valve spindle having a slot therein, and a bifurcated valve lever, of a bolt secured to the lever and which engages said slot in the valve spindle, and an adjusting feed screw to serve as a bearing for the bolt, when the valve is to be opened, substantially as described.

4. A valve operating device comprising a valve, a valve spindle slotted in part at one end, a feed screw adjustable longitudinally of the valve stem and projecting into said slot, and a forked valve lever which incloses the feed screw and locks the same at stated times and provided with a bolt extending into the slotted end of said spindle, substantially as specified.

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

THEODORE JAMES.

Witnesses:
F. E. SWIFT,
R. E. DEWEY.