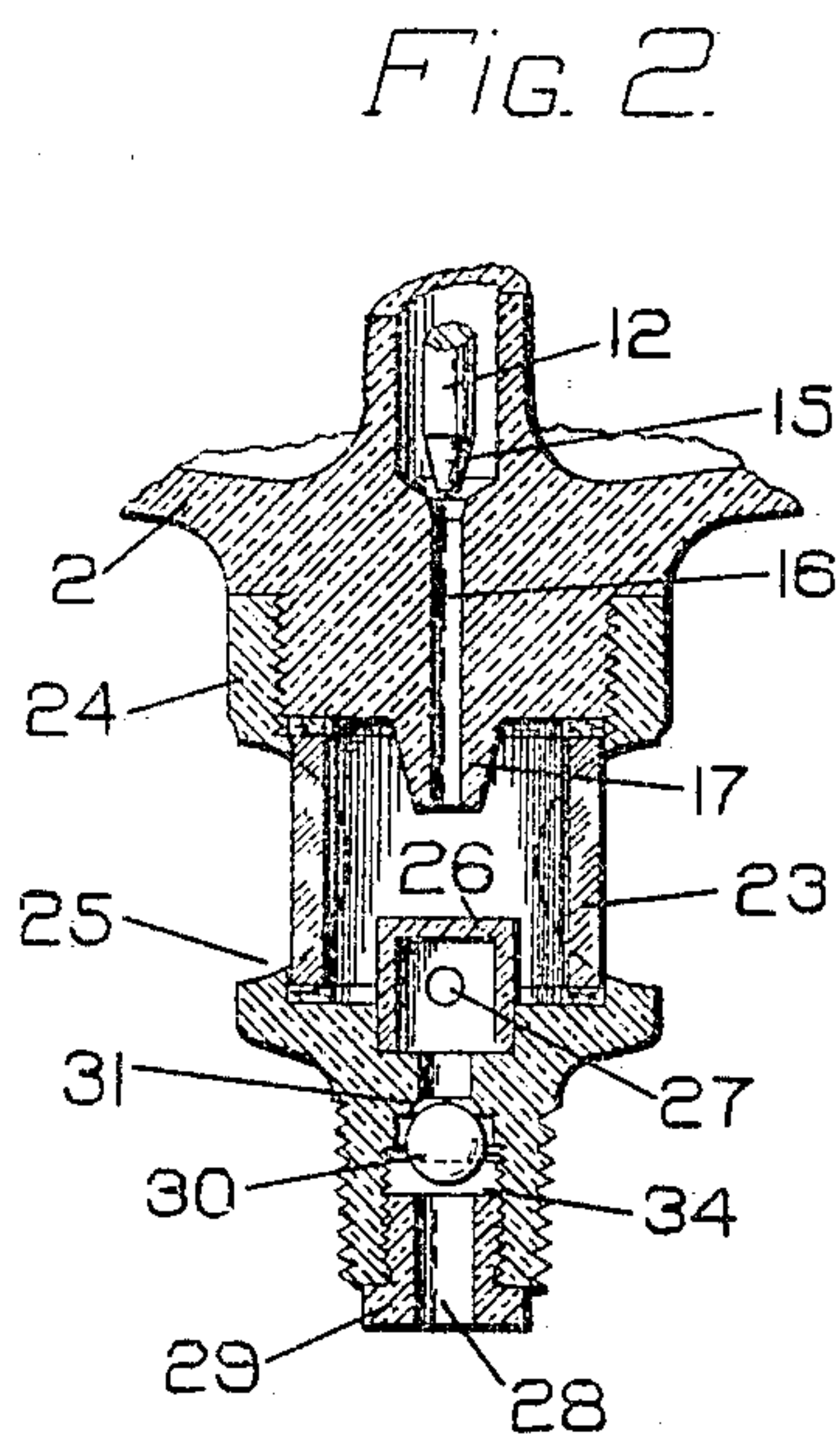
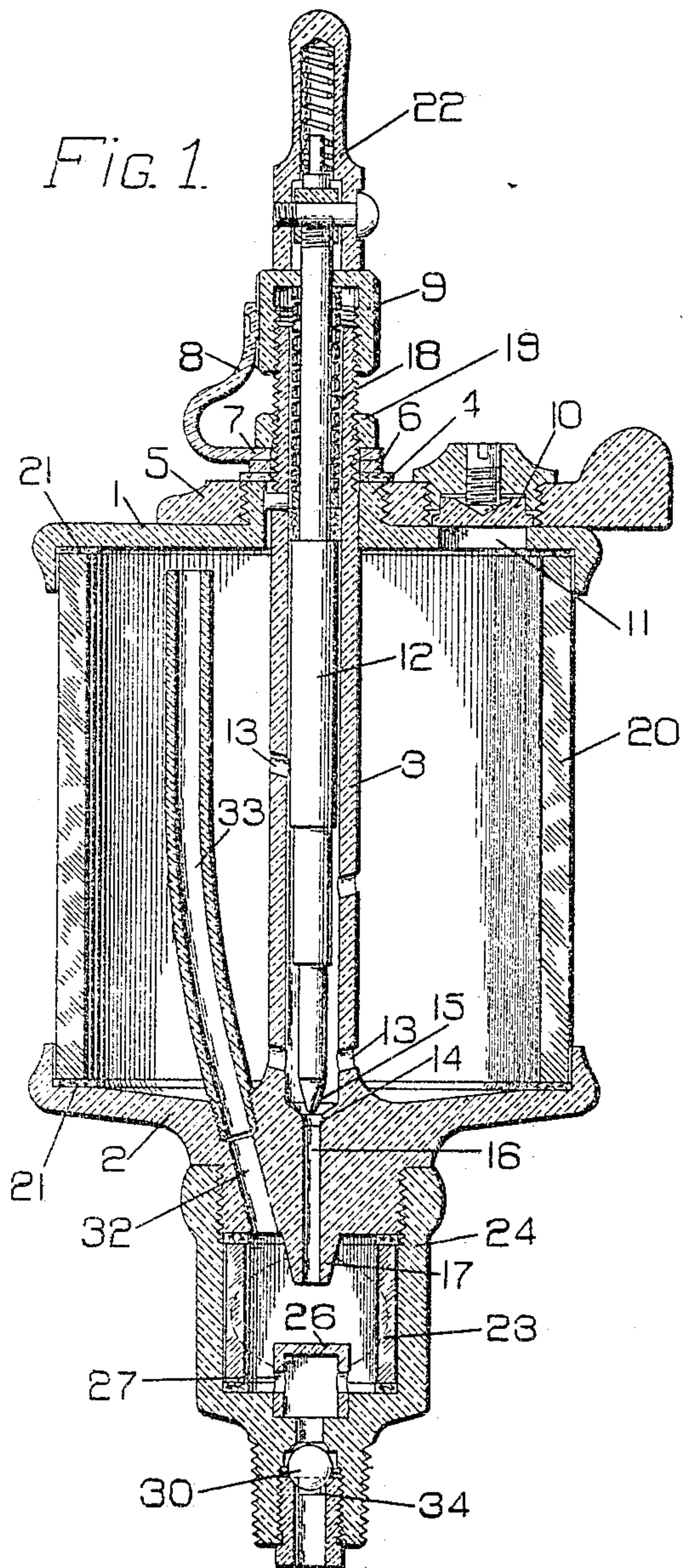


No. 781,585.

PATENTED JAN. 31, 1905.

J. J. AULL.  
LUBRICATOR.

APPLICATION FILED OCT. 10, 1904.



WITNESSES

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# UNITED STATES PATENT OFFICE.

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## LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 781,585, dated January 31, 1905.

Application filed October 10, 1904. Serial No. 227,844.

*To all whom it may concern:*

Be it known that I, JEROME J. AULL, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Lubricators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to lubricators of the kind usually comprising a head-piece carrying the filling-hole and the operating parts for governing the feed, a base-piece, between which head-piece and base-piece a glass or other cylinder forms the body of the cup, a sight-feed chamber containing a short glass cylinder and screwed or otherwise secured to the bottom of the base-piece and having its lower end threaded for attachment to the bearing to be lubricated.

My present cup, however, is designed for explosive-engines; and my invention consists in novel means to form a back check or baffling device to prevent exploded gases from entering the sight-feed chamber and so interfering with the formation of the drop from the nipple that it is difficult if not impossible to tell whether the cup is feeding properly.

The novelty of my invention will be hereinafter more fully set forth, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a central section of a lubricator embodying my invention. Fig. 2 is a central section of the lower part of the same, containing the sight-feed glass and check mechanism and at right angles to the corresponding parts of Fig. 1.

The same numerals of reference are used to indicate identical parts in both the figures.

In the drawings, 1 represents the cap-piece of the usual or any suitable construction; 2, the base-piece, having extending up from its center a hollow tube 3, passing through a perforation in the center of the cap-piece and exteriorly threaded at its upper end, which projects above the cap-piece. The cap-piece also has a threaded boss 4, upon which is screwed a scutcheon

5. Screwed upon the threaded portion of the tube 3 just above the boss 4, or it may be simply slipped over said portion without being screwed thereto, is a washer 6, and likewise fitted over said washer 6 is a second washer 7, terminating in a spring-arm 8, which engages a milled or ratchet cap-piece 9, screwed upon the upper end of the tube 3. The scutcheon 5 carries a valve 10, which covers very tightly the filling-hole in the cap-piece 1.

Within the tube 3 is a valve-stem 12, which near its upper portion fits the bore of the tube to form a guide for the stem and which above said guide portion is reduced, so as not to fill the bore of the tube. There are inlet-holes through the sides of the tube at various points to let the oil into the interior of said tube, and the bottom of said tube is counterbored to form a valve-seat at 14, which is controlled by the tapering end 15 of the lower end of the stem 12. A perforation or outlet for the oil 16 extends from the valve-seat through the base 2, and its lower end terminates in a discharge-nipple 17 within the sight-feed chamber. Surrounding the upper diminished end of the stem 12 is a coiled spring 18, whose lower end bears against a shoulder on the stem and whose upper end bears against the under side of the screw-cap 9. A nut 19, screwed upon the washer 7, serves to bind all the parts together and to hold the cylindrical body 20, which is preferably of glass, clamped tightly between the cap-piece and base. Cork or other suitable washers 21 are interposed between the upper and lower edges of the cylindrical body 20 and the cap-piece and base, respectively, to form perfectly air-tight and oil-tight joints. Upon the top of the rod or stem 12 and pivoted thereto is a knuckle-piece or snap-handle 22, whose flattened lower ends rest upon the ratchet-cap 9 and serve to operate the stem 12 vertically to open or close the valve 15.

All of the parts so far described are common and well known to oil-cups of this description.

The sight-feed glass 23 is of the usual or any suitable construction and is held in place centrally by a cage 24, which is screwed upon the



lower end of the base 2 and has large openings, as seen at 25 and by the dotted lines in Fig. 1, on its opposite sides to expose as much of the glass as possible. In the bottom of this cage within the sight-feed chamber is a cylindrical covered box 26, fitted in a bore in the base of the cage and with perforations 27 through its sides opening into a perforation 28, extending entirely through the bottom of the cage, and a plug 29 screwed therein. This box forms what I call the "baffling device." Just above the plug 29 is a chamber containing a ball-valve 30, adapted to drop down upon the perforation in the plug or be raised up and seated against a valve-seat 31 in the perforation just under the box 26. Secured in the upper end of the perforation 32 through the base 2 and opening into the top of the sight-feed chamber is the usual equalizing-pipe 33, extending up and opening near the cap-piece 1.

The above-described cup operates, essentially, in the same manner as other cups of this character which are known to the trade, except that the box 26 in case of a back shot of the engine will nearly, if not entirely, muffle the same and prevent the gases from the engine from rushing in a body into the sight-feed chamber and interfering with the proper formation of the drops on the nipple, for the first action of such back shot will be to close the ball-valve 30 against the upper seat, and should any of the gases escape said valve they will be caught in the box 26 and be so muffled and in such small quantity that they will simply pass through the perforations 27 and being diffused will not affect the formation of the drop on the nipple.

It is to be observed, as in Figs. 1 and 2, that the upper edge of the plug 29 has recesses 34 to prevent the check-valve 30 from seating itself on the top of the aperture of the plug 29, so that even when the check-valve is resting upon the top of the plug there is free passage-way for the oil around the check-valve and into the aperture 28, from whence it can readily pass to the bearing to be lubricated, as seen in Fig. 1.

Having thus fully described my invention, I claim—

1. In a lubricator of the character described and in combination with the body of the cup and its appurtenances a discharge - nipple opening into a sight-feed chamber, there being a discharge - aperture leading from the sight-feed chamber, and a baffling device within said sight-feed chamber, whereby back shots or back pressures are prevented from interfering with the proper formation of the drops and discharge of the oil in dropping from the nipple, substantially as described.

2. In a lubricator of the character described and in combination with the body of the cup and its appurtenances, a discharge - nipple opening into a sight-feed chamber, there be-

ing a discharge-aperture leading from the sight-feed chamber, a check-valve within said aperture, and a baffling device placed between said discharge-nipple and check-valve, whereby back shots or back pressures are prevented from interfering with the proper formation of the drops and discharge of the oil in dropping from the nipple, substantially as described.

3. In a lubricator of the character described and in combination with the body of the cup and its appurtenances, there being a discharge-aperture opening into a sight-feed chamber, said sight-feed chamber, a baffling device in the bottom of said sight-feed chamber with perforations through its sides, a discharge-aperture leading to the parts to be lubricated, a check-valve in said aperture, said discharge-aperture opening at its upper end below the baffling device, substantially as described.

4. In a lubricator of the character described and in combination with the body of the cup and its appurtenances, a sight-feed chamber secured to the base of the body and consisting of a cage with openings through its side, a sight-feed glass within said cage, the latter having a counterbored base, a baffling device in said base, an aperture through the bottom of the cage opening at its upper end below the baffling device aforesaid, a plug in the bottom of the cage having an aperture through it communicating with the aperture in the bearing to be lubricated, and a check-valve in a chamber between the top of the plug and a seat in the base of the cage which communicates with the aforesaid baffling device substantially as described.

5. In a lubricator of the character described and in combination with the body of the cup and its appurtenances, a sight-feed chamber secured to the base of the body and consisting of a cage with openings through its side, a sight-feed tube within said cage and having a counterbored base, a tubular box-like structure in said base, with perforations through its sides into the sight-feed chamber, to form a baffling device, an aperture through the bottom of the cage opening at its upper end into the box aforesaid, a plug in the bottom of the cage having an aperture through it communicating with the aperture in the bearing to be lubricated, a ball check-valve in a chamber between the top of the plug and a seat in the base of the cage which communicates with the aforesaid box, and a vent at the top edge of the aperture in the plug to permit the passage of oil from the cup to the bearing when the check-valve is resting on the top of the plug, substantially as described.

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Witnesses:

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