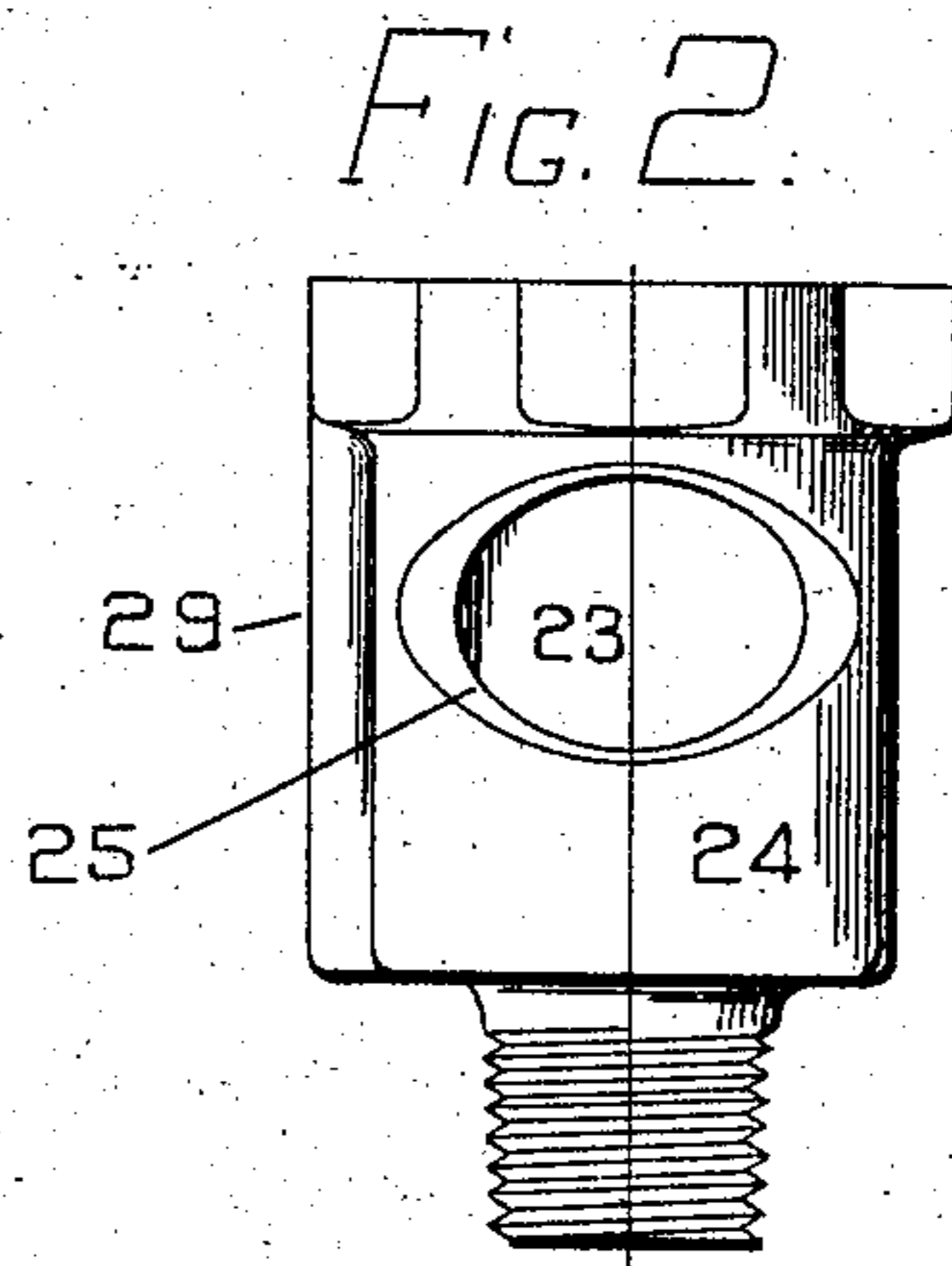
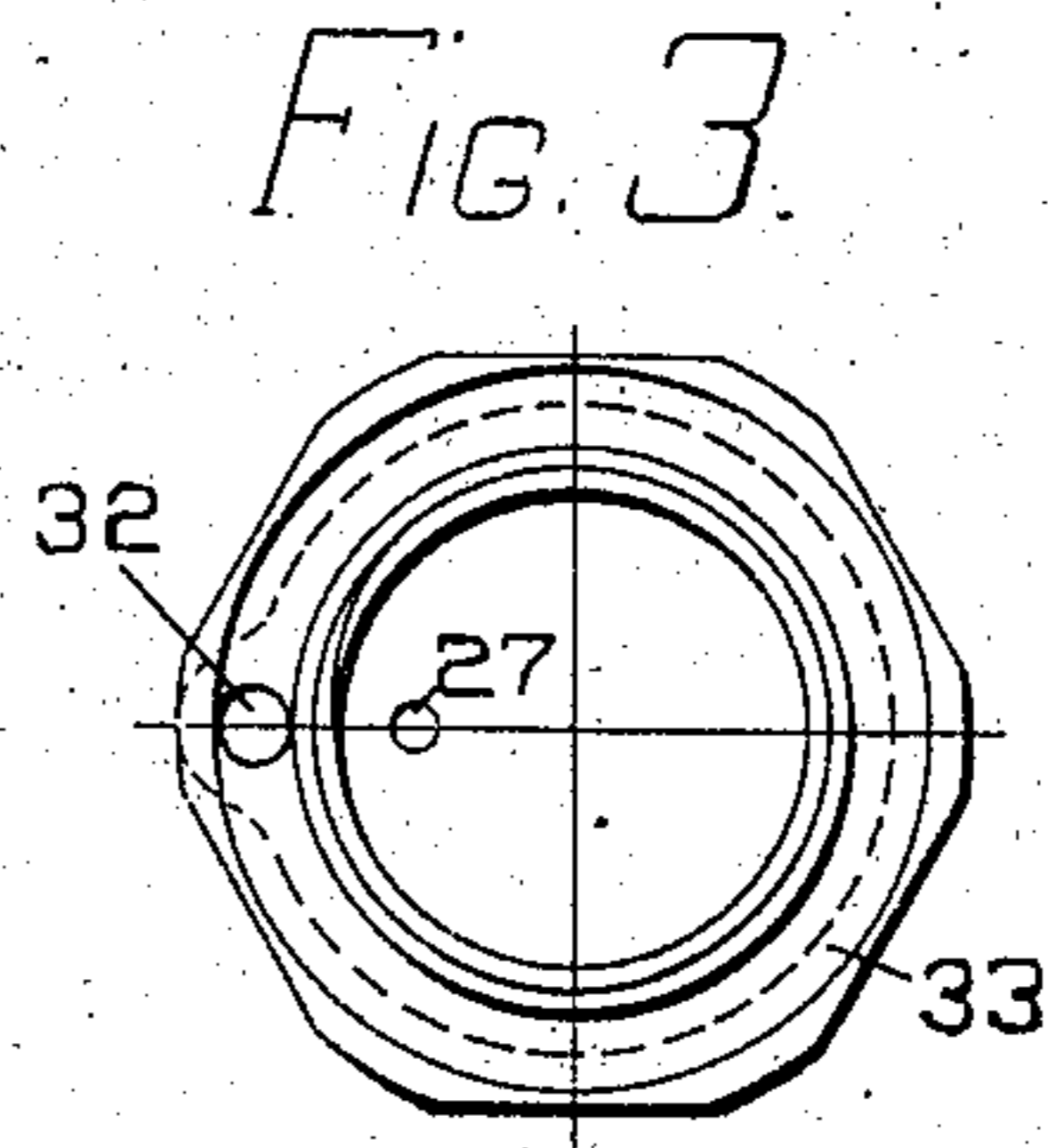
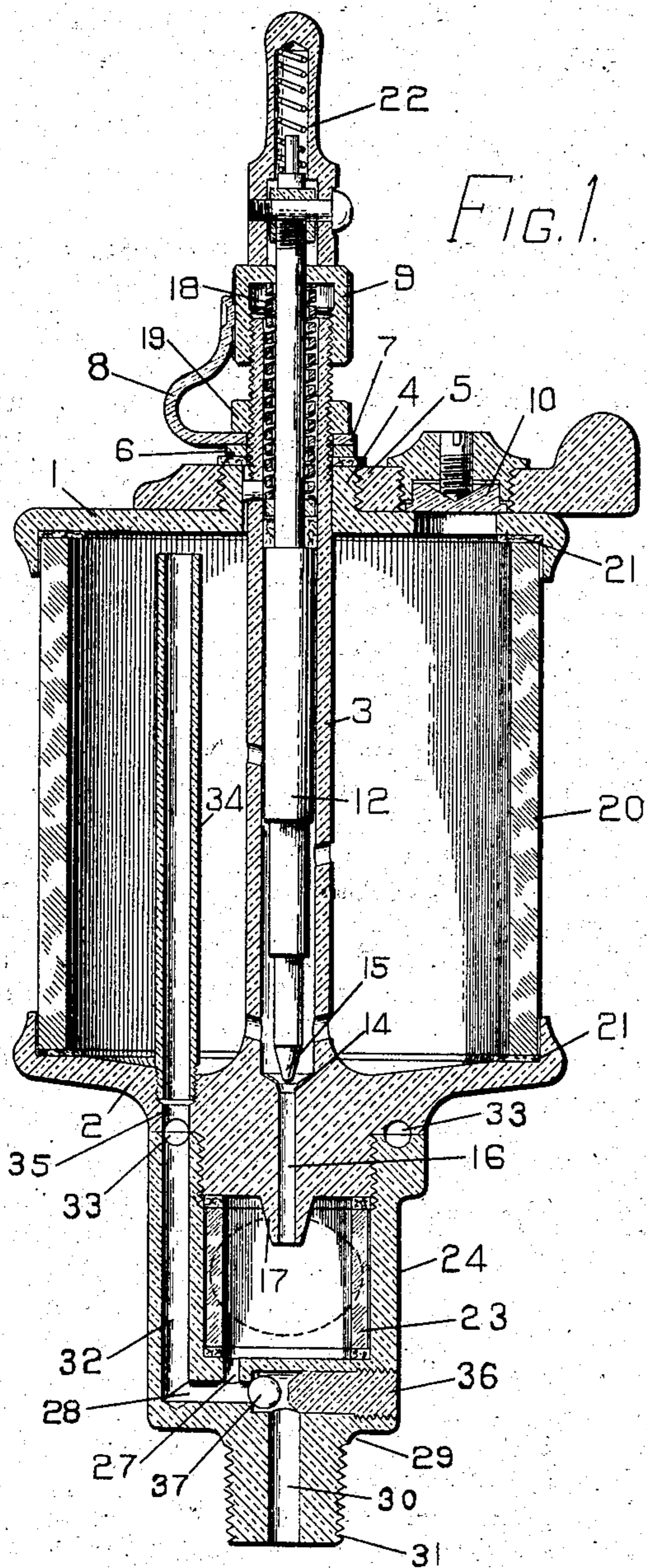


No. 781,553.

PATENTED JAN. 31, 1905.

H. RITTER.
LUBRICATOR.

APPLICATION FILED OCT. 10, 1904.



WITNESSES.

H. P. Miller
Hannah Hermann

INVENTOR.

Harry Ritter
by Chas M. Beck
his ATTORNEY.

UNITED STATES PATENT OFFICE.

HENRY RITTER, OF CINCINNATI, OHIO, ASSIGNOR TO THE LUNKENHEIMER COMPANY, OF CINCINNATI, OHIO, A CORPORATION OF OHIO.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 781,553, dated January 31, 1905.

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To all whom it may concern:

Be it known that I, HENRY RITTER, 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 generally, 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 is situated a glass or other cylinder forming the body of the cup, and 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 to interfere with the formation of the drop on the nipple and so clouding the sight-feed glass 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 detail elevation of the sight-feed-glass cage or holder. Fig. 3 is a plan view of Fig. 2.

The same numerals of reference are used to indicate identical parts in all 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 beneath the discharge-nipple 17 by a cage 24, which is screwed upon the lower end of the base 2 and has large openings, as seen at 25, Fig. 2, and the dotted lines of Fig. 1 on its opposite sides, to expose as much of the glass as possible. At the bottom of the sight-feed chamber is an aperture 27, which communicates with a larger horizontal aperture 28 in the base 29 of the cage 24, one end of which connects with the outlet-aperture 30 in the shank 31, the other end connecting with a larger vertical aperture 32. At the juncture of the upper edge of the cage 24 and the base, as seen in Fig. 1, is a circumferential groove 33, intersecting the vertical bore 32 and communicating with the equalizing-tube 34 through the aperture 35. Screwed into the base 29 is a plug 36, whose inner end forms a stop for a ball check-valve 37, which seats at the end of the horizontal aperture 28. The construction is such that should there be a back shot the ball 37 will instantly be seated to close the horizontal aperture 28, thus checking the flow of the gas; but should any of the gas pass the check-valve it would pass through the horizontal aperture 28, thence up the larger vertical aperture 32, and through the equalizing-tube rather than through the small aperture 27, which action effectually prevents the gases from interfering with the formation of the drops and their fall from the nipple. As soon as the pressure from the back shot is relieved the ball 37 will fall away and rest against the end of the plug 36 without closing the aperture 30, thus permitting the steady and usual feeding of the oil, as will be readily understood.

The object of the circumferential groove 33 is to insure an opening for the gases into the cup irrespective of the position of the equalizing-tube 34.

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, said sight-feed chamber having a discharge-aperture leading to the parts to be lubricated, a check-valve in said discharge-aperture, and an aperture adjacent to the sight-feed chamber and communicating therewith, leading from said discharge-aperture to the body of the cup, 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, said sight-feed chamber having a discharge-aperture leading to the parts to be lubricated, the support for the sight-feed glass having an aperture adjacent to the sight-feed chamber and communicating therewith and leading from said discharge-aperture to the body of the cup, and a check-valve interposed to close the communication between two said apertures, substantially as described.

3. 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, said sight-feed chamber, having a small aperture leading therefrom to a larger aperture adjacent to the sight-feed chamber, said adjacent aperture leading from a discharge-opening in the shank of the cup to the body of the cup and a check-valve in and for said last-named apertures, substantially as described.

HENRY RITTER.

Witnesses:

HOWARD HOPPLE,
JOHN C. SOETJE.