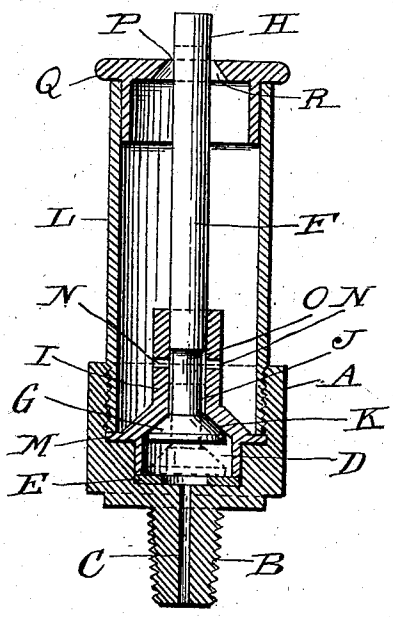
No. 815,088. PATENTED MAR. 13, 1906.

L. GLEASON.

LUBRICATOR.

APPLICATION FILED OCT. 28, 1905.



Witnesses

Jos. N. Blackwood

G. E. Bellard

Inventor

Lewis Gleason

By W. A. Bartlett & Son

Attorneys

UNITED STATES PATENT OFFICE.

LEWIS GLEASON, OF FRANKLIN, PENNSYLVANIA.

LUBRICATOR.

No. 815,088. Specification of Letters Patent. Patented March 13, 1906.

Application filed October 28, 1905. Serial No. 284,872.

To all whom it may concern:

Be it known that I, LEWIS GLEASON, a citizen of the United States, residing at Franklin, in the county of Venango and State of Pennsylvania, have invented new and useful Improvements in Lubricators, of which the following is a specification.

My invention relates to lubricators; and its object is to provide an oil-cup of simple construction and efficient operation designed to be used to automatically lubricate the cylinders of air-compressors, air-pumps, and similar pneumatic devices in which the air-pressure is utilized to operate the lubricator to admit oil intermittently to the cylinder or other part to be lubricated.

To this end my invention is embodied in preferable form in the device illustrated in the accompanying drawing and hereinafter described.

In the drawing the view shown is a central vertical section of my improved lubricator.

Referring to the drawing, A is the base of the cup or lubricator, and it is provided with a depending exteriorly-threaded shank B, adapted to be secured to the cylinder or similar part to be lubricated and provided with an oil passage-way C, having its lower end leading to the cylinder or other part in which the air-pressure is produced. The upper end of the passage-way C communicates with a valve-chamber D, formed in the base A and provided at its bottom with a washer E, preferably of soft copper, so as to form a tight joint with the valve when the latter is seated on the washer. Adapted to reciprocate vertically in this chamber is a valve F, having a head G and an upper guide-rod portion H. This valve extends upwardly through tubular guide-cage I, the central passage-way J of which not only serves as a guideway for the valve-rod, but also as an oil-feed passage-way. The guide-cage is provided with a conical valve-seat K at the lower end of opening J, against which the upper side of the valve-head G is adapted to seat when the valve is in the upper closing position.

A tube or pipe L is screw-threaded at its lower end into the base A and forms the cup or receptacle for the oil. The lower end of this cup bears on a flange M, extending from the guide-cage and serves to hold the latter firmly in place.

In the tubular part of the guide-cage are formed several openings N, by which oil may pass from the receptacle to the passage-way J. The lower end of the valve-rod above the head is cut away for some distance along the rod to form a reduced portion O, so as to provide a channel for the free passage of the oil down passage-way J. The extent of the reduction of the rod determines the amount of the flow of oil from the receptacle to the part to be lubricated, and this reduced portion, therefore, serves as a governing means for the feed of oil.

The rod H extends up into the oil-cup and through an opening P in an oil-cup cover Q, which is adapted to close the upper end of the oil-cup. The opening P is enlarged sufficiently to form an air-inlet, and the lower surface of the cover is counterbored at R around the opening away from the rod, so as to prevent any upward pumping of the oil by contact of the rod with the cover. Owing to the air-inlet provided there is no pressure within the cup, and hence a simple loose-fitting slip-cover may be provided. The upper end of the rod projects above the top of the cover.

The operation is as follows: Upon the stroke of the piston in the air-pump or cylinder the air-pressure passing through the passage-way C will lift the rod-valve F from its lower seat, opening the chamber D to passage-way C and permitting the oil therein to flow to the cylinder. As the valve is lifted its upper face will seat in the valve-seat K, closing the passage-way J and cutting off the supply of oil from the receptacle. As the piston returns the pressure will be removed, and the atmospheric pressure in the receptacle, by the admission of air through the inlet in the cover and the weight of the rod, will cause the valve to drop down again upon its lower seat. While the valve is in its upper position, a small quantity of oil will be admitted from the receptacle to the passage-way J by reason of the reduced portion O of the rod being in register with the openings N, and when the valve drops down this quantity of oil will be carried down into the oil-chamber D. The rod portion H of the valve above the cover not only adds weight to the valve, so that it may descend rapidly, but also serves as an indicator to denote by its reciprocation that the valve is working properly.

Having thus described my invention, what I claim is—

In a lubricator for air-pumping devices, in combination with an oil-receptacle, a valve,

a valve-chamber, said chamber having an opening at its lower end leading to the air-pressure device, and an opening at the upper end leading to the receptacle, said valve having a face adapted to seat by gravity on said lower opening and a face adapted to close said upper opening by the force of the air-pressure, said valve having a valve-rod, a guide-tube through which said rod extends upwardly, said rod having a close fitting in the tube at its upper end and having a reduced portion between its upper end and the valve-head, and oil-entrance openings in the wall of said tube between its ends, substantially as described.

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

LEWIS GLEASON.

Witnesses:
SAML. L. RICE,
H. L. FERGUSON.