

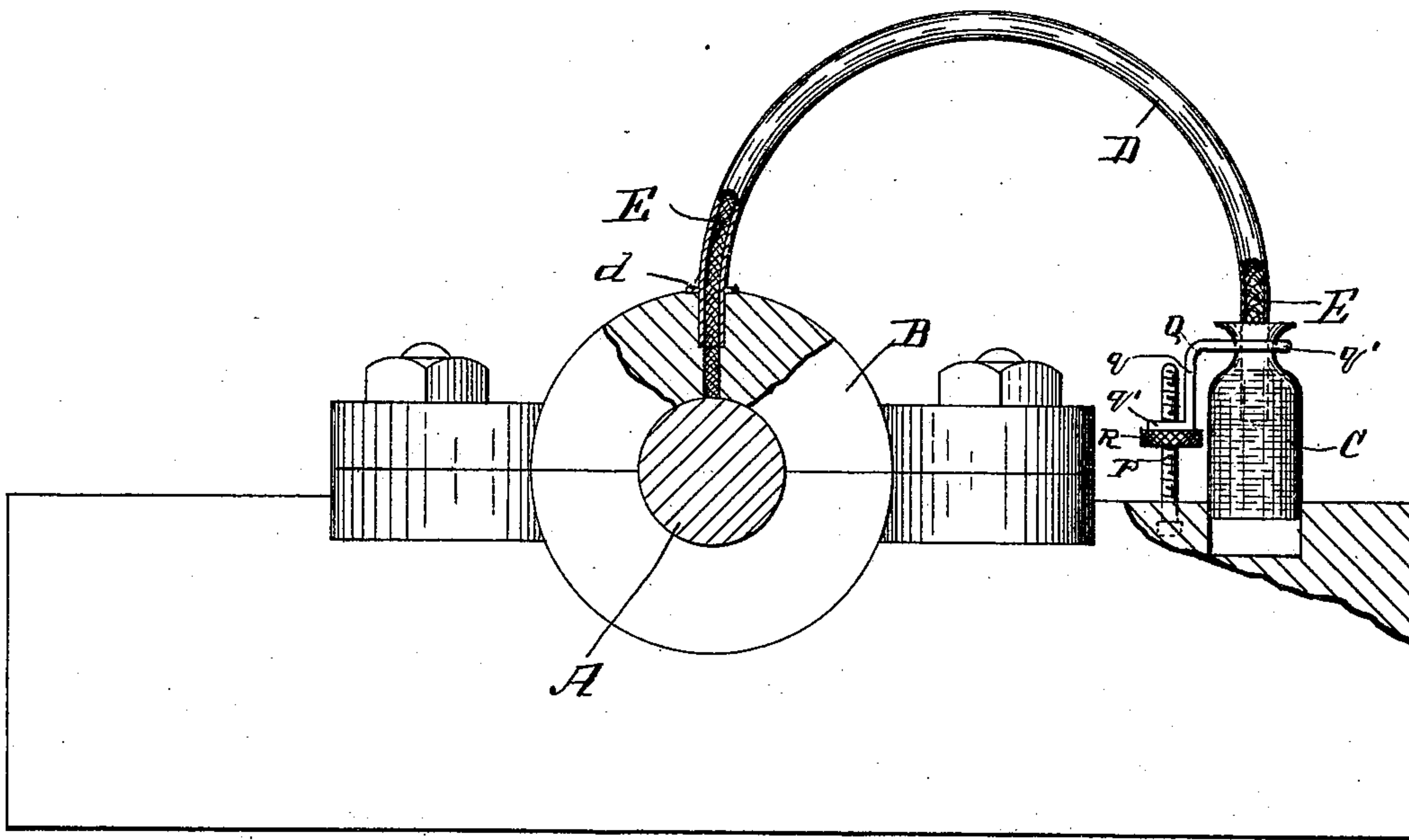
(No Model.)

J. COMER.

LUBRICATOR FOR SHAFT BEARINGS.

No. 407,771.

Patented July 30, 1889.



Witnesses  
Charles J. Frohman  
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Inventor  
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By his Attorney  
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# UNITED STATES PATENT OFFICE.

JOHN COMER, OF ANDERSON, CALIFORNIA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF THREE-FOURTHS TO R. BERGER AND EDWIN ALDERSELEY, OF SAME PLACE, AND FREDERICK H. DEAKIN, OF REDDING, CALIFORNIA.

## LUBRICATOR FOR SHAFT-BEARINGS.

SPECIFICATION forming part of Letters Patent No. 407,771, dated July 30, 1889.

Application filed May 15, 1888. Serial No. 273,955. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN COMER, a citizen of the United States, residing at Anderson, in the county of Shasta and State of California, have invented certain new and useful Improvements in Lubricators for Shaft-Bearings; and I do 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 drawing, and to the letters of reference marked thereon, which form a part of this specification.

This invention has relation to that class of devices designed to lubricate the bearings of shafts and axles; and it has for its object, first, to construct a device of this character in which the liability of the feeding of the impurities of the oil to the bearings will be prevented; second, to construct a device for the purpose set forth, which will be capable of feeding the oil to the shaft in increased or decreased quantities, as needed, and, third, to construct a lubricator which will not be liable to become inoperative by the filling of the wick with the impurities of the oil.

The object, generally, of the present invention is to construct a device of the character set forth, which will be most simple and durable in its construction, perfect in its operation, and the cost of manufacture of which will be reduced to the minimum.

To these various ends my invention consists in certain peculiarities in the construction, arrangement, and combination of parts, substantially as hereinafter set forth, and particularly pointed out in the subjoined claims.

The accompanying figure of drawing illustrates a lubricator constructed after the plan to be hereinafter set forth, and shows the same applied to a horizontal shaft, the said shaft, a portion of the journal-box, and the extremity of the lubricating-tube being shown in section.

The letter A represents a shaft, and the letter B a journal-box receiving the bearing of the said shaft and serving to support the same. To one side of the shaft A is placed

the lubricating cup or reservoir C, which is preferably formed of glass, in order that its contents will be exposed to view. Within this reservoir C one extremity of a tube D is placed, which tube is bent to form a siphon-tube and has its opposite extremity situated within a recess formed in the journal-box B. This siphon-tube D is adapted to receive the wick E, which will obviously be of sufficient length to extend from the oil in the reservoir to the bearing to be lubricated. A flange or projection *d* is formed on the siphon-tube to prevent its extending too far within the journal-box.

P designates a vertical screw-threaded pin, the lower extremity of which is secured in any suitable manner near the shaft-bearing, and Q designates a support comprising the vertical portion *q* and the horizontal arms *q'*, which latter extend from the said vertical portion in opposite directions, as shown. The upper of these horizontal arms is formed in a suitable manner to engage the reservoir, and the lower of these arms is formed with a perforation adapting it to receive the pin P. Beneath this lower arm *q*, and working vertically upon the pin P, is a nut R. It will thus be seen that the reservoir may be raised or lowered simply by raising or lowering the nut R. To this construction of means for raising or lowering the reservoir I do not wish to be understood as limiting myself, as the same is simply shown for the purpose of illustrating one mode by which the object may be accomplished.

Heretofore it was found, in the employment of lubricators which depended upon capillary attraction for their operation and in which the reservoir was situated beneath the bearing to be lubricated, that the wick was liable to absorb the impurities of the oil and feed the same to the bearing. These impurities would also have a tendency to clog and contaminate the wick, and by lessening the capillary attraction thereof would cause the action of the device to become unreliable. It was further found with lubricators heretofore constructed that it was impossible to cause the amount of flow of the oil to be reg-



ulated by the speed at which the shaft was running. Thus if the shaft was at a certain time running at a high velocity it would receive the same amount of oil as it would at  
5 another time when running at a low rate of speed, and, furthermore, it required considerable experience and calculation to place the reservoir at the proper height to feed the oil in proper quantities to the bearing to be lubricated. These disadvantages were owing to  
10 the fact that the reservoir was heretofore immovably located upon some portion of the machinery.

It will be quite obvious that with a device  
15 constructed after the plan herein set forth the above disadvantages will not be experienced, owing to the fact that both siphonic action and capillary attraction are obtained, and that the reservoir is distinct from the  
20 journal-box, or any portion of the machine, and is placed movably in connection therewith. It will thus be quite obvious that the amount of flow of the oil can be so regulated (by raising or lowering the reservoir) as to  
25 meet the various requirements occasioned by the running of the shaft at different rates of speed—that is to say, if it is desired to lubricate a shaft running a number of revolutions per minute, the reservoir is raised to a height  
30 sufficient to give siphonic action governed by full atmospheric pressure, and the capillary

attraction ceasing the wick becomes an absorbent plug, and in order to lubricate shafts running at a low rate of speed the said reservoir is lowered to a corresponding degree,  
35 and the action of the siphon lessening capillary attraction takes it place. In regulating the flow of the oil care must be taken that the reservoir be not placed so high as to make the device a perfect siphon, in which event  
40 it would feed too fast, nor so low as to be compelled to contend against full atmospheric pressure, in which event it would feed too slow and would become unreliable.

Having now described my invention, what  
45 I believe to be new, and desire to secure by Letters Patent, and what I therefore claim, is—

A lubricator having both siphonic action and capillary attraction, for the purpose set  
50 forth, and comprising a reservoir adjustably mounted in juxtaposition to the bearing to be lubricated, a siphon-tube extending from the reservoir to a point near said bearing, and a  
55 wick within said siphon-tube and extending from the oil in the reservoir to said bearing.

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

JOHN COMER.

Witnesses:

COLINO B. BURN,  
TEMER C. BROWN.