

J. ROSS.
Lubricators.

No. 143,422.

Patented Oct. 7, 1873.

Fig. 2.

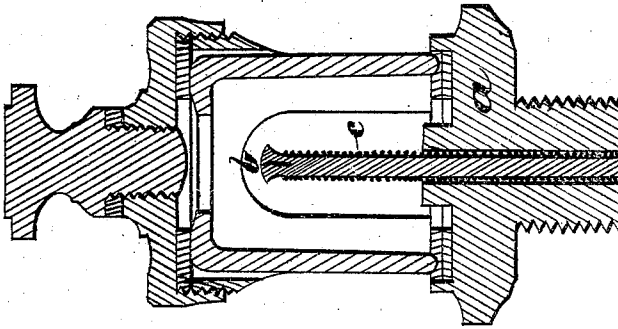
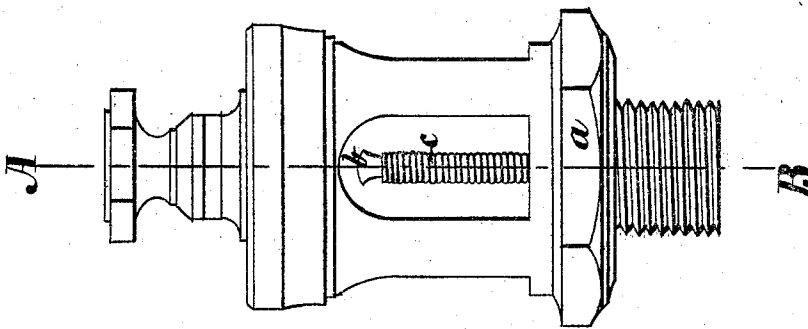


Fig. 1.



Witnesses:
John R. Heard.
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Inventor:
James Ross.
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his atty.

UNITED STATES PATENT OFFICE.

JAMES ROSS, OF CHARLESTOWN, ASSIGNOR TO JOHN F. ROSS, OF NORTH CAMBRIDGE, MASSACHUSETTS.

IMPROVEMENT IN LUBRICATORS.

Specification forming part of Letters Patent No. **143,422**, dated October 7, 1873; application filed July 28, 1873.

To all whom it may concern:

Be it known that I, JAMES ROSS, of Charlestown, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Lubricators; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in oil-cups or lubricators for the purpose of lubricating journals, bearings, &c. The invention consists in the employment of a spindle surrounded by a spiral wire that projects through the bottom of the cup, by which arrangement the liquid used as a lubricator is obliged to flow around the spindle in a spiral direction, of a pitch equal to the pitch of the spiral, before it can reach the bearing that is to be lubricated. Grit and impurities are thus prevented from passing with the lubricating liquid to the journal, as the spiral wire acts as a strainer, and retains the grit and other impurities. The amount of lubricating liquid to be conveyed from the cup to the journal can be easily regulated, simply by increasing or decreasing the pitch of the spiral. No stop-cock is needed to regulate the flow of the lubricating liquid.

On the drawing, Figure 1 represents a side elevation of my invention, and Fig. 2 represents a central longitudinal section on the line A B shown in Fig. 1.

a represents the body of the cup, in the usual manner, being perforated with a hole, through which the lubricating liquid flows to the journal, bearing, or other part that is to be lubricated; but, as a great deal of the oil is wasted when allowed to flow unobstructed from the cup, I have provided a simple and efficient device for regulating the amount of oil that issues from the cup in a given time. The same consists in the employment of a spindle, *b*, of a circular or polygonal section, surrounded by a spiral wire, *c*, as shown in Figs. 1 and 2. The spindle *b* and spiral wire *c* project through the hole in the body *a* of the cup, as represented in Fig. 2. The spiral wire is wound closely around the spindle *b*, and the hole in the body *a* is made just a little

larger in diameter than the outside diameter of the spiral wire *c*, by which arrangement the oil in the cup is obliged to flow spirally around the spindle *b* between the spaces of the spiral wire *c*.

From the above will be understood that the closer the spiral wire *c* is wound the less oil can issue from the cup, and that a greater quantity of oil will flow therefrom if the pitch of the spiral wire *c* is increased. Consequently, I can regulate the delivery of the lubricating liquid from the cup simply by closing or stretching out the spiral wire *c*. The spindle *b* is widened a little at the upper end, so as to prevent it from sliding down through the spiral wire *c*.

Another advantage of the spiral wire *c* is, that it acts as a strainer for the liquid, thus preventing any dust, grit, or dirt contained in the cup from being conducted to the journal or bearing that is to be lubricated.

This, my invention, is applicable to any of the ordinary cups now used; and I claim no invention in the construction or general arrangement of the cup shown in the drawing, except as relates to the spindle *b* and spiral wire *c* projecting through a suitable hole in the body *a* of the cup.

The lower end of the spiral wire, as well as the lower end of the spindle, is to be kept in contact with the shaft that is to be lubricated, so that, by the revolution of the shaft, the oil will be drawn to the bearing, and cease to flow as soon as the shaft is kept stationary.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent, and claim—

As a regulator for oil-cups and lubricators, the circular or polygonal spindle *b*, surrounded by a loosely-wound spiral wire, *c*, projecting through the oil-cup, and kept in contact in their lower ends with the shaft that is to be lubricated, as and for the purpose herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 19th day of July, 1873.

JAMES ROSS.

Witnesses:

ALBAN ANDRÉN,
ED. TERREY.