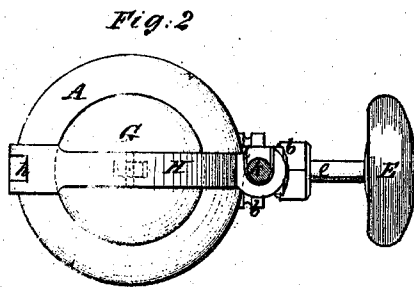
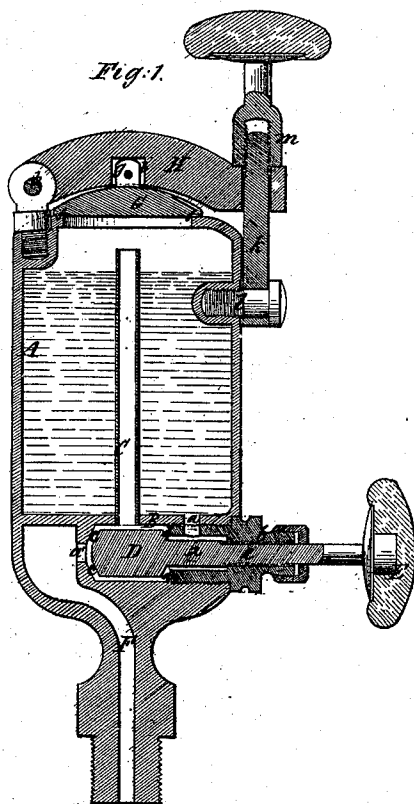


J. ROSS.
OIL CUP.

No. 102,973.

Patented May 10, 1870.



Witnesses:
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JAMES ROSS, OF NORTH CAMBRIDGE, MASSACHUSETTS.

Letters Patent No. 102,973, dated May 10, 1870.

IMPROVED OIL-CUP.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, JAMES ROSS, of North Cambridge, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Oil-Cups; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, and in which—

Figure 1 represents a vertical section of an oil-cup, constructed in accordance with my improvement, and Figure 2 is a partly sectional plan of the same, corresponding to fig. 1.

Similar letters of reference indicate corresponding parts in both figures.

This invention relates more especially to oil-cups that are used on steam-engines, where steam can be admitted into the cups, as for steam-cylinders, &c.

The object of my improvement is to obtain a steady and easily graduated feed of the lubricating material, either by means of condensation of steam admitted into the cup, or by gravitation; and to this end

It consists in the provision and arrangement of a double valve, with its accompanying seats and passages, within and in the bottom of an oil-cup, whereby the above object is obtained.

It further consists in a novel construction of the cover, whereby the lubricating material in a solid form, as tallow or suet, can be introduced into the cup and the latter be tightly closed.

To enable others to construct oil-cups in accordance with my invention, I will proceed to describe the same with reference to the drawing.

A is an oil-cup, at the bottom of which a horizontal cylindrical compartment, B, is formed.

This compartment communicates with the inside of the cup by means of a tube, C, which passes upward from its top, in the middle of said cup, above its contents.

One end of this compartment has an outlet, *a'*, while the other end, which is open to the outside of the cup, is provided with a stuffing-box, *b*, through which a piston-valve, D, is operated.

This valve is made to work against the seats *c* *d*, being at both ends formed to fit those seats, and having its stem *e* provided with a male screw-thread, to turn in a female screw-thread formed in the stuffing-box *b*.

E is a knob, formed on the outer end of the valve-stem *e*, by means of which the valve D can be easily worked.

F is a passage, which is formed in the shank of the oil-cup, and which allows the lubricating material passing through the compartment B and outlet *a'* to flow to the place to be lubricated.

G is the top valve or cover of the oil-cup, which is

provided with a white-metal seat, *f*, and on its top, in the center, with the lug *g*.

H is a spanner or lever, hinged to the top of the oil-cup at *h*, which passes centrally across the valve G, allowing the lug *g* of the latter to fit loosely into a recess, *i*, formed in the under side of the spanner, where it is held by a pin passing horizontally through the sides of the spanner and the lug *g*.

The end of the spanner H opposite the hinge *h* is recessed on one side, so that a screw-rod, *k*, which is pivoted at *l* to the side of the oil-cup, may be swung up into said recess for the purpose of holding the valve G to its seat by means of the screw-nut *m* operating on the recessed end of the spanner H.

Now, when the feed is to be obtained by means of gravitation from the bottom of the oil-cup, the valve D is turned so as to be off both the seats *c* and *d*, as shown in fig. 1, whereby steam is admitted into the top of the oil-cup through the passage F, outlet *a'*, and tube *c*, allowing the lubricating material to pass through the openings *a* *a* into the compartment *b*, and from thence through the outlet *a'*, along the passage F, to the place to be lubricated. The discharge can be graduated by giving more or less opening between the valve D and its seat *d*.

When the feed is to be obtained by means of condensation, the valve D is turned to be closed against the seat *d*, keeping open a free passage to the steam, which is condensed in the top of the oil-cup, whereby the lubricating material is drawn up to pass through the tube C until it is all emptied, when the water of condensation is passed off through the openings *a* *a* by placing the valve D again in position, as shown in the drawing. The amount of feed can be easily graduated by different lengths of the tube C. The shorter the tube the more condensing-surface will be afforded in the top of the oil-cup, which will increase the amount of feed.

The double valve D is preferably made of steel and self-acting, while the top valve G is provided with a white-metal seat, so that an oil-cup constructed as herein described needs no pet-cocks and its valves no grinding, making it a simple and efficient steam-lubricator.

What is here claimed, and desired to be secured by Letters Patent, is—

1. The combination of the double valve D, seats *c* *d*, passages *a* *a*, tube C, and passage F, substantially as and for the purpose herein described.

2. The cover or top valve G, hinged spanner H, pivoted screw-rod *k*, and nut *m*, substantially as and for the purpose herein set forth.

Witnesses:

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