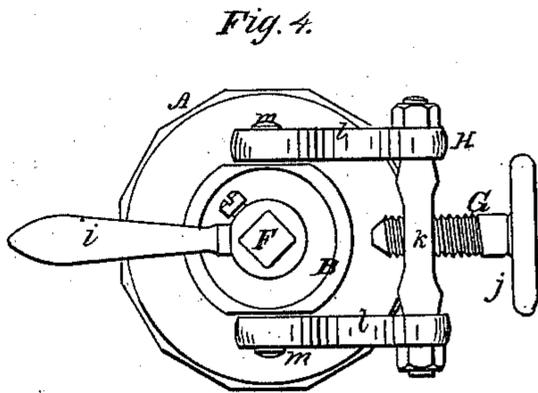
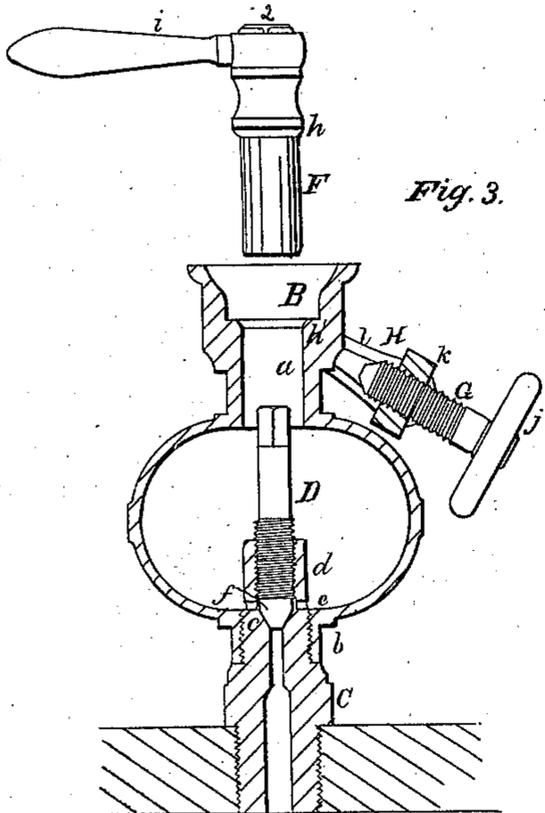
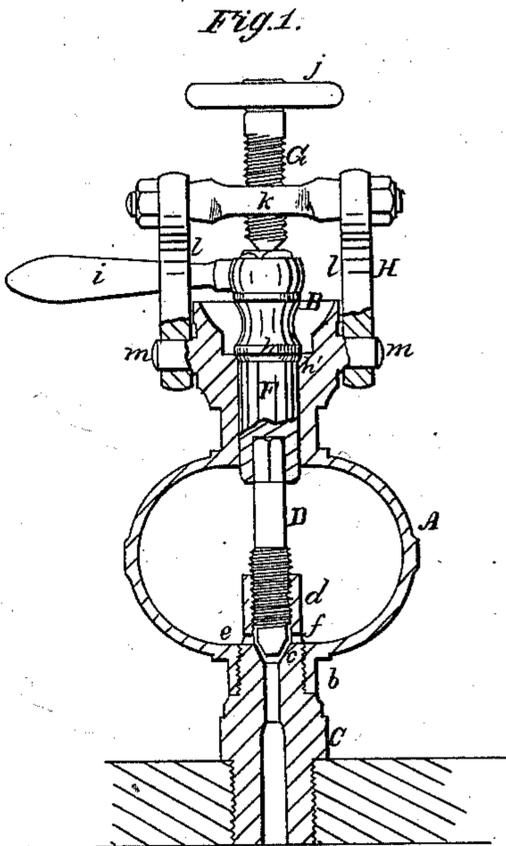
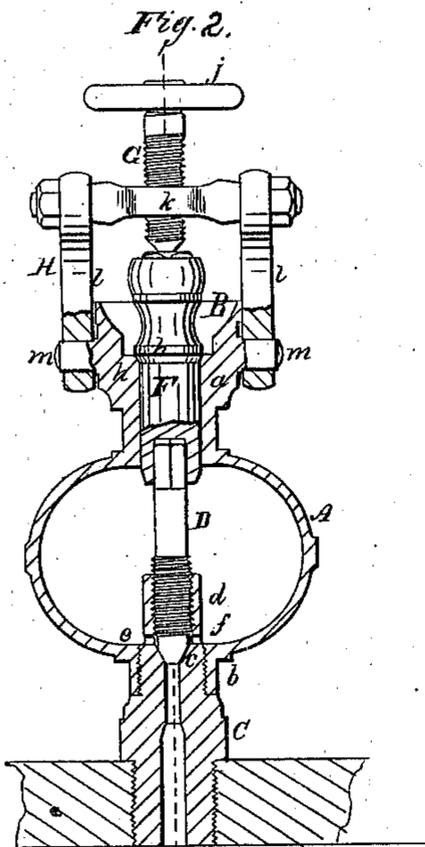


*R. Ross,
Lubricator.*

N^o 81,542.

Patented Aug. 25, 1868.



*Witnesses.
Wm. Albert Saxe
John Clarke*

*Inventor.
Robert Ross
by his attorney
Henry Howson.*

United States Patent Office.

ROBERT ROSS, OF BETHLEHEM, PENNSYLVANIA.

Letters Patent No. 81,542, dated August 25, 1868.

IMPROVEMENT IN OIL OR SUET-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, ROBERT ROSS, of Bethlehem, Northampton county, Pennsylvania, have invented an Improved Oil or Suet-Cup; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to an improvement in that class of oil or suet-cups which are used for lubricating cylinders, steam-chests, and other parts of a steam-engine; and it consists, firstly, of a yoke or frame hinged to the upper portion of the cup, and provided with a screw-rod, arranged to hold a valve-spindle in its seat against a pressure of steam, as fully described hereafter; and my invention consists, secondly, of a valve-spindle ground to a seat, and to a passage in the upper portion of the cup, so as to prevent the escape of steam between the second spindle and the passage and seat.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figure 1 is a vertical section of my improved oil or suet-cup.

Figure 2, the same, with the parts turned to a different position.

Figure 3, a vertical section on the line 1-2, fig. 2, showing one of the parts detached, and

Figure 4 a plan view of fig. 3.

Similar letters refer to similar parts throughout the several views.

A represents the oil-reservoir, and B the mouth of the cup, communicating with the said reservoir through a passage, *a*, fig. 3. To a projection, *b*, beneath the reservoir, is screwed a hollow branch, C, by means of which the cup is secured to the cylinder, steam-chest, or other part of an engine which requires lubrication.

The upper end, *d*, of the hollow branch projects into the reservoir, and has internal threads corresponding with the threads of a screw-valve, D, the latter being reduced in diameter below its thread, so as to form an annular space, *f*, in the projection *d*. Holes *e* form a communication between this annular space and the interior of the reservoir A.

The lower cone-shaped end of the screw-valve D is grooved to a seat, *e*, in the hollow branch, and its upper end is made square, and adapted to a similarly-shaped opening in the lower end of a spindle, F. The latter passes through, and is ground to, but so as to turn freely in, the passage *a*, and on that portion of the spindle within the cup B is an annular projection, *h*, which forms a valve ground to a seat, *h'*, at the bottom of the said cup, (see fig. 3.)

The valve-spindle F is provided with a suitable handle, *i*, by means of which it may be turned, and against its upper end is caused to bear (under the circumstances described hereafter) a screw-rod, G, having a hand-wheel, *j*, and passing through and adapted to internal threads cut in a yoke or frame, H. The latter consists of the cross-piece *k*, through which the rod G passes, and which is connected to links *l l'*, the lower ends of the latter being arranged to turn on trunnions or pins *m* projecting from opposite sides of the cup B.

When the reservoir A is to be filled with oil or suet, the handle *i* and its spindle F are turned to a limited extent, in order to close the screw-valve upon its seat *e*, and thereby prevent the admission of steam into the reservoir. The screw-rod G is then turned and raised by means of its hand-wheel, until its lower end is clear of the valve-spindle F, after which the yoke H is turned laterally upon the pins *m* to the position shown in figs. 3 and 4, and the valve-spindle is raised from its seat and from the passage *a*, the lubricating-material being then introduced into the reservoir through the cup B and through the said passage.

After filling the reservoir, the parts described as having been moved or detached, are restored to their original position, and the handle *i* is turned until the screw-valve D is raised from its seat, and communication opened between the interior of the branch C and the reservoir. Steam then enters the reservoir, and displaces a portion of the oil or suet, which passes through the openings *e* into the annular space *f*, and thence through the hollow branch to the portion of the engine to be lubricated.

But for the screw-rod G, the pressure of steam within the reservoir would raise the valve-spindle F from its seat. By means of the said screw-rod, however, the valve-spindle is held down, and the escape of steam prevented. It should be understood, however, that this pressure of the screw-rod upon the valve-spindle is not sufficient to prevent the latter from being freely turned by means of its handle *i*.

The valve-spindle F is, as before described, ground to the passage *a*, so that, even if it should be raised slightly above its seat *h'*, no steam could escape between it and the passage.

As the screw-valve D is operated directly by turning the valve-spindle F, it can be raised from its seat to a greater or less extent, as required, and the supply of lubricating-material through the branch C regulated to a nicety.

My improved cup is simple in construction and arrangement of its parts, and is not liable to get out of order, while the cumbrous and expensive cocks and springs, (uncertain in their action,) which are usually employed in connection with this class of lubricators, are dispensed with.

I claim as my invention, and desire to secure by Letters Patent—

An oil-cup, constructed and operating as herein set forth.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

ROBERT ROSS.

Witnesses:

ROBERT WRIGHT,

FRANCIS CASSIDY.