S. E. KLEINSCHMIDT.

Lubricator.

No. 50,719. Patented Oct. 31, 1865.

Fig. 1.

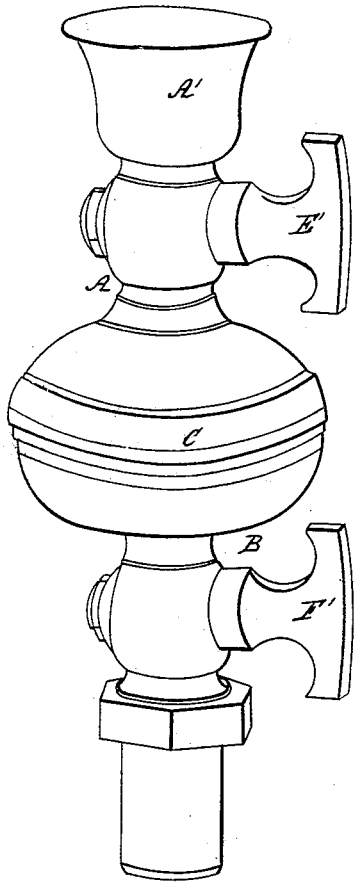
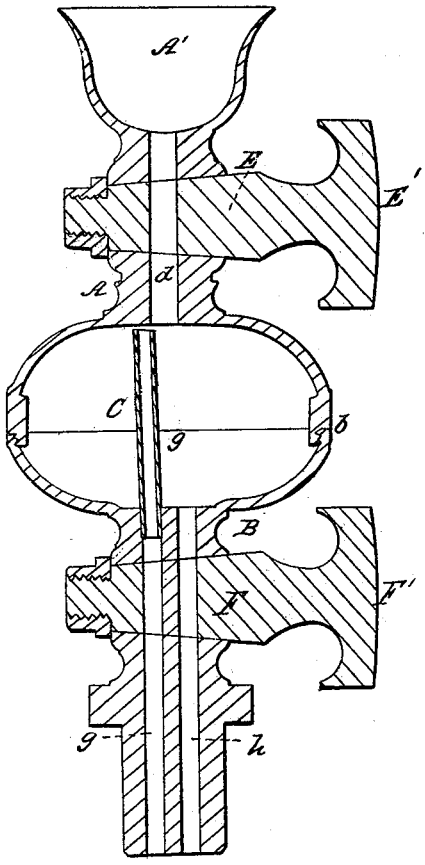


Fig. 2.



Witnesses:

W. H. Burridge.

J. Holmes

Inventor:

S. E. Kleinschmidt

UNITED STATES PATENT OFFICE.

S. E. KLEINSCHMIDT, OF CLEVELAND, OHIO.

IMPROVEMENT IN LUBRICATORS.

Specification forming part of Letters Patent No. **50,719**, dated October 31, 1865.

To all whom it may concern:

Be it known that I, S. E. KLEINSCHMIDT, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Oil-Cups; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the cup. Fig. 2 is a vertical section.

Like letters of reference refer to like parts in the views.

The oil-cup is made in two sections, A and B, formed as represented, and united by a screw-joint at *b;* or it may be otherwise constructed, so as to be adapted to the purpose for which it is designed. The enlarged portion C is an oil-chamber. From this chamber to the mouth A′ is an orifice or opening, *d*.

Below the oil-chamber, and communicating with the machinery to be lubricated with oil, are orifices or openings *g* and *h*. The orifice *g* is extended up till near the top of the oil-chamber by a tube, *g′*, which is one side of the opening *d* from above. The orifices *d*, *g*, and *h* above and below the chamber extend through the plugs E and F of the faucets E′ and F′ when the faucets are in a certain position, as represented, and by means of which the orifices are closed by turning the faucets in the ordinary manner.

The practical benefits resulting from an oil-cap constructed with two orifices below the oil-chamber, one extending up, as described, are as follows: The oil-cup being in its position on the machine or steam-chamber, the faucet F′ must be turned so as to close the orifices *g* and *h*, shutting off the steam from below, and the faucet E′ turned so as to open the orifice *d*, when, by pouring the oil into the mouth A′, it runs down into the chamber C, and when the required amount of oil is in the chamber, the faucet E′ must be turned, closing the orifice *d*. The faucet F′ is then adjusted so as to open the orifices *g* and *h*, when the oil will run down the orifice *h*, and the steam will rise in the orifice *g* and pass out at the top of the tube *g′*, filling up the chamber C above the oil.

In the first place, when the orifices *g* and *h* are first opened, the steam will rise principally in the orifice *g*, for the oil will be running down in the orifice *h*, and the pressure of the oil will prevent the steam from rushing up, as it does in the other orifice; and then the chamber above the oil is soon filled with steam, which causes an equilibrium, or the pressure of steam will be equal, and the oil will run down by its own weight. The orifice *g* acts as a vent to relieve the orifice *h* from the pressure of the steam, and thus allow the oil to pass freely down. Where there is but one orifice below the chamber, when the oil runs down out of the chamber, a partial vacuum is formed above, and the pressure of steam from below being so great, it retards very much the descent or flow of the oil, forcing it out more or less through the joints of the cup; but by the two orifices the chamber is filled with steam, the steam occupying the space occupied by the displacement of the oil as it runs out. The displacement of the oil being thus entirely taken up by steam rising through the orifice *g*, causes the oil to flow most freely through the orifice *h* onto the mechanism.

What I claim as my improvement, and desire to secure by Letters Patent, is—

As an improved article of manufacture, an oil cup or lubricator composed of feed-cup A′, faucet E, opening *d*, chamber or reservoir C, faucet F, and openings *h* and *g*, when the latter are extended by means of a tube, *g′*, to near the top of chamber for the passage of steam through it above the oil.

S. E. KLEINSCHMIDT.

Witnesses:

W. H. BURRIDGE,

A. W. MCCLELLAND.