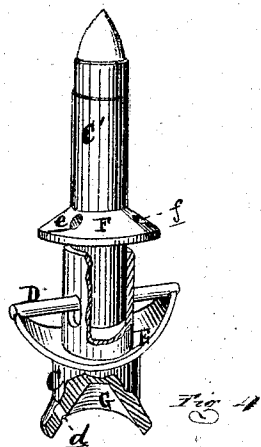
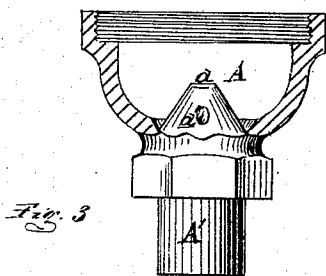
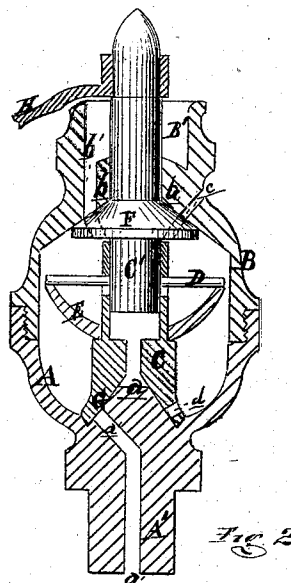
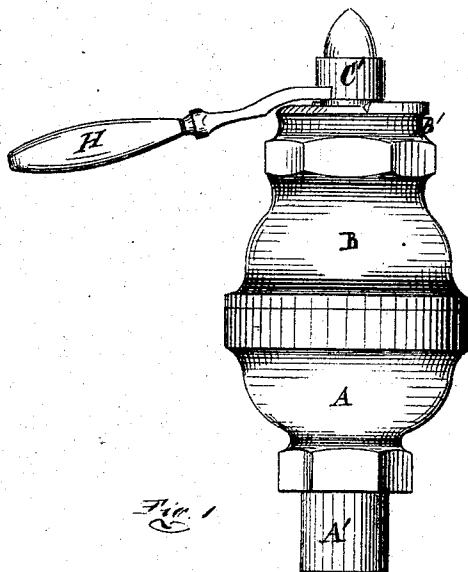


WILLIAM RIDER.

Improvement in Oil Cups.

No. 118,276.

Patented Aug. 22, 1871.



ATTEST

*H. P. Everts.*  
*Myron & Church*

INVENTOR:

*William Rider*  
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# UNITED STATES PATENT OFFICE.

WILLIAM RIDER, OF ALMONT, MICHIGAN.

## IMPROVEMENT IN OIL-CUPS.

Specification forming part of Letters Patent No. 118,276, dated August 22, 1871.

*To all whom it may concern:*

Be it known that I, WILLIAM RIDER, of Almont, in the county of Lapeer and State of Michigan, have invented new and useful Improvements in Oil-Cups; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, and being a part of this specification, in which—

Figure 1 is an elevation of my device. Fig. 2 is a vertical section of the same. Fig. 3 is a sectional elevation of the lower half or cup of the device; and Fig. 4 is a perspective view, partially in section, of the valvular stem.

The nature of this invention relates to the construction of a continuous-feeding oil-cup, more especially designed for lubricating the steam-chests and cylinders of steam-engines; and it consists in the novel and peculiar construction and arrangement of the several parts, as more fully hereinafter set forth.

In the drawing, A represents a semi-globular metallic oil-cup provided with a stem, A', which should be threaded to screw into the cover of the steam-chest. B is a semi-globular cap, threaded to screw into the top of the cup A, and at the top is formed, with an oil-receiving mouth, a receptacle, B'. When together the space within the cup and cap forms an oil and air-tight chamber, as shown in Fig. 2. *a* is a conical valve-seat raised in the center of the bottom of the cup, and *a'* is an angular orifice leading from the face of this seat down through the stem A'. *b* is a conical recess forming a valve-seat in the center of the under side of the cap, and *b'* is an orifice leading from the oil-receptacle B' through its face at one side, while *c* is a second orifice in the face of the seat, communicating with the exterior below the oil-receptacle. C C' is a valve-spindle in two parts, the lower one, C, being seated on *a* and provided with a socket at its upper end to receive the lower end of the upper section of the spindle C', held therein by a pin, D, inserted through both, the holes in the socket being oval to allow the upper spindle to have free vertical movement therein. A single-leaf semi-elliptic

spring, E, is fitted to the lower spindle in such a manner that its extremities, coming under the projecting ends of the pin, will tend to force the spindles apart as far as the oval openings in the socket will permit. F is an annular valve on the stem bearing on the seat in the cap, the spring E pressing it and the valve G, formed in the lower end of the lower spindle, firmly on their respective seats. The valve G has an orifice, *d*, through it, on a zone with the orifice *a'* in its seat, with which it may communicate when the spindle is turned for that purpose by its lever H to the proper position, and thus allow the oil to pass from the cup to the interior of the part on which the device is placed. *e* is an orifice in the valve F communicating with the passage *b'* to the oil-receptacle B'. *f* is another orifice in said valve communicating with the air-passage *c*. The orifices in the valves are so arranged that, when the spindle is turned to fill the cup, the passage *a'* will be closed, while the upper ones will be open. In this position the oil-chamber may be readily filled by pouring the oil into the receptacle B', flowing down thence through the openings *b'* and *e*, while the air escapes through the orifices *c* and *f*. When the globe is filled, by turning the spindle a little these passages are closed, and by turning a little more, to bring the passages *d* and *a'* coincident, the oil will flow out of the globe in quantity easily regulated.

It will be seen that this device, if properly fitted when made, cannot leak under any pressure of steam, as the pressure tends to press the valves upon their seats, while the flow of oil can be adjusted to a nicety.

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

The construction and arrangement of the cap A, stem A', cap B, receptacle B', valve-seats *a* *b*, spindle C C', spring E, pin D, lever H, valves F G, and openings or passages *a'*, *b'*, *c*, *d*, *e*, and *f*, as and for the purpose set forth.

WILLIAM RIDER.

Witnesses:

JOHN RATTRAY,  
WILLIAM MORGAN.