(No Model.)

E. M. GRACE.

OIL CUP.

No. 419,436. Patented Jan. 14, 1890.

FIG. 1.

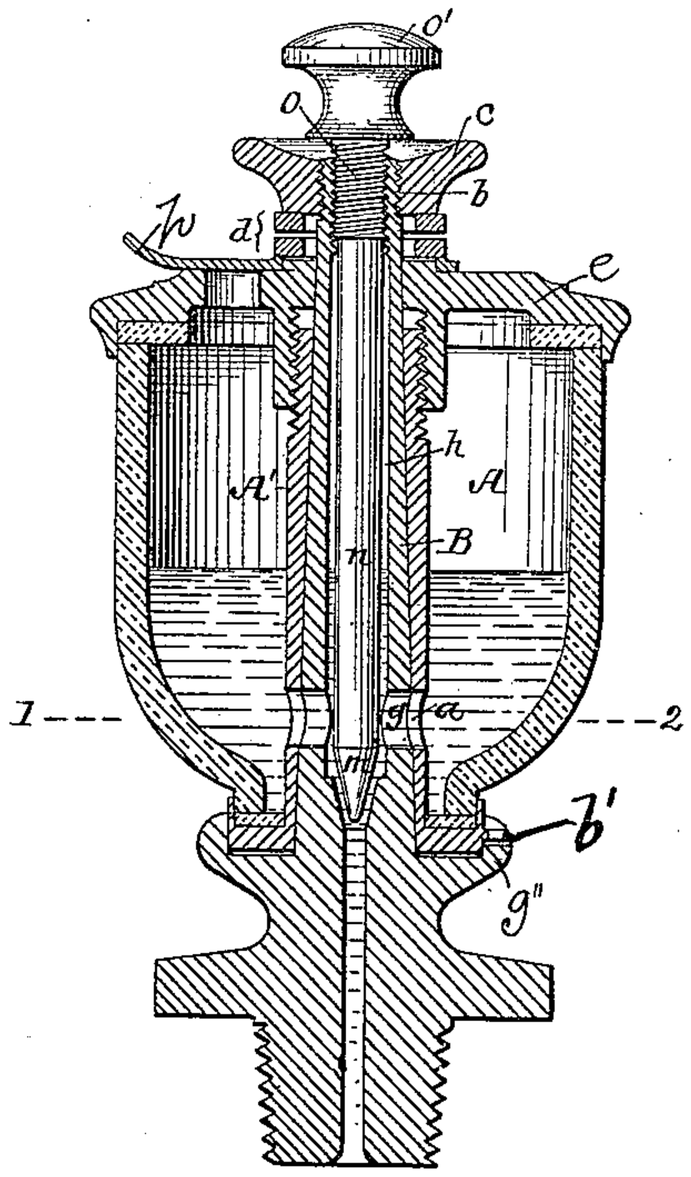


FIG. 5

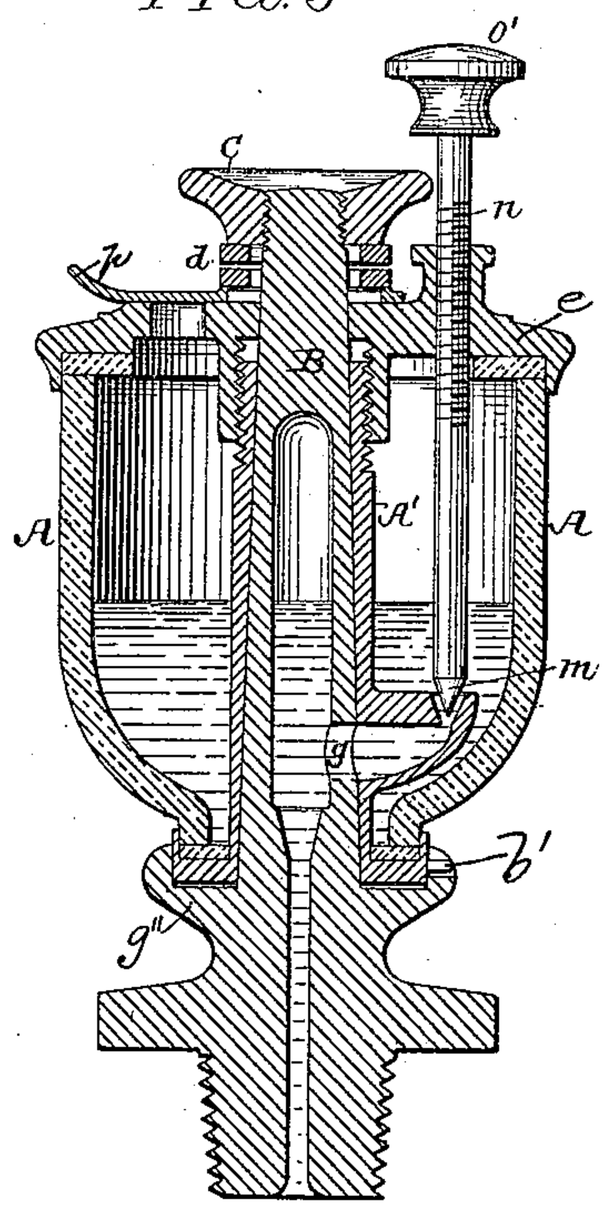


FIG. 4.

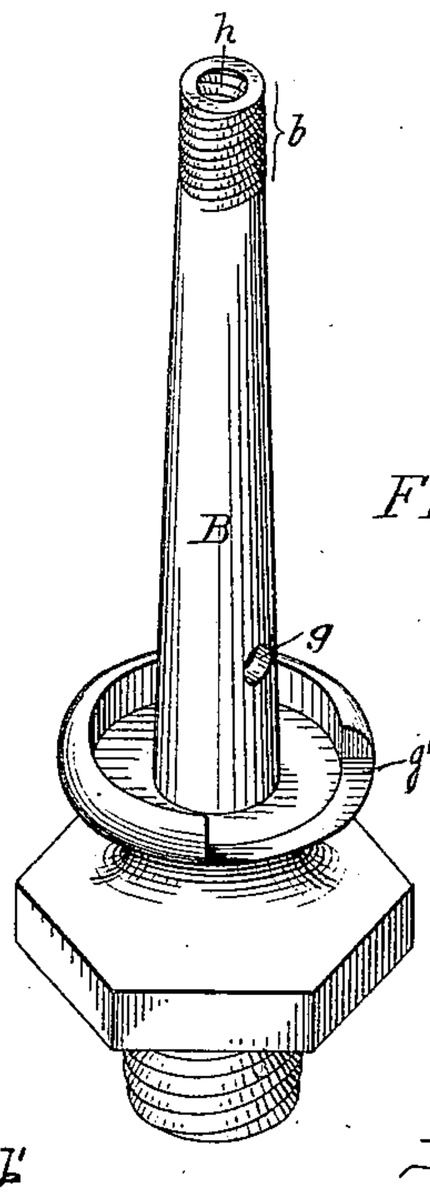


FIG. 2.

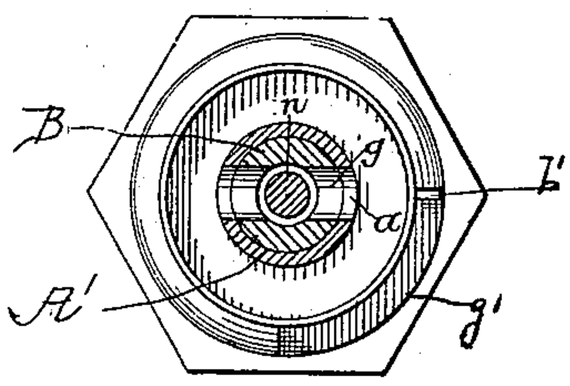
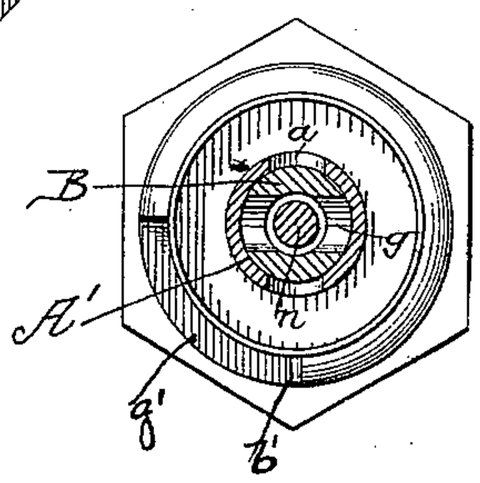


FIG. 3.



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UNITED STATES PATENT OFFICE.

EDWARD M. GRACE, OF PHILADELPHIA, PENNSYLVANIA.

OIL-CUP.

SPECIFICATION forming part of Letters Patent No. 419,436, dated January 14, 1890.

Application filed March 15, 1889. Serial No. 303,442. (No model.)

To all whom it may concern:

Be it known that I, EDWARD M. GRACE, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Oil-Cups, of which the following is a specification.

My invention relates to that class of oil-cups or lubricators from which the flow of oil is governed by a regulating-valve, the object of my invention being to so construct such an oil-cup or lubricator that the flow can be entirely cut off or turned on at any time without disturbing or affecting the position of the regulating-valve, so that when the latter is once properly set no further attention need be devoted to the same.

In the accompanying drawings, Figure 1 is a sectional elevation of an oil-cup constructed in accordance with my invention. Figs. 2 and 3 are sectional plan views of the same on the line 1 2, Fig. 1, with the parts in different positions. Fig. 4 is a perspective view of the spindle on which the oil-reservoir is mounted, and Fig. 5 is a view illustrating a modification of the invention.

A is the oil-reservoir, constructed of any suitable material, having a central tube A′, mounted so as to turn upon a spindle B, preferably tapered, as shown, the bearing-surface between the tube A′ and spindle being ground or turned to make a tight joint. The upper portion *b* of the spindle is provided with an external screw-thread, on which turns a winged adjusting-nut *c*, between which and the top of the reservoir is interposed a coiled spring *d*. By this means the tube A′ of the reservoir is at all times pressed firmly upon the spindle B and the reservoir is prevented from loosely turning thereon. The interior of the spindle B is hollow and is provided near its lower end with a transverse port or passage *g*, and in the tube A′ of the reservoir is a port or passage *a* in the same horizontal plane as that of the spindle. The lower portion of the bore *h* of the spindle is contracted in diameter, so as to form a tapered valve-seat for the valve *m*, which is carried by a rod *n*, the upper portion of which is provided with a screw-thread *o*, adapted to a threaded opening at the upper end of the spindle B. The upper end of the rod *n* is provided with a roughened knob *o′*, by which the rod may be turned, and the valve *m* thus moved from or toward its seat, the quantity of oil flowing through the passage *h* being thereby regulated to a nicety. Normally the reservoir occupies such a position on the spindle B that the ports *a* and *g* are open, and oil hence flows into the hollow spindle and from the bore of the same, the flow being regulated by the valve *m*. (See Fig. 2.)

In order to enable the person using the cup to tell when the ports are in or out of line with each other, I provide the tube A′ with a pin *b′*, projecting within a recess *g′*, cut in the flange *g″* of the spindle B, the pin forming a stop for the reservoir when moved to either end of the recess. When it is desired to cut off the flow of oil, the reservoir A and the tube A′ are turned upon the spindle B, and the ports *g* and *a* are thus moved laterally out of line with each other, as shown in Fig. 3.

Any desired means of supplying oil to the reservoir may be used, a simple form being that shown in Fig. 1, in which an opening in the top of the reservoir is covered by a spring-plate *p*, hung to the spindle B between the spring *d* and the top plate *e* of the reservoir A.

In using my improved cup the valve *m* is first adjusted so that the desired quantity of oil will be fed from the spindle, and after such adjustment it is unnecessary to adjust the valve again until the quantity of oil used is to be changed, and in cutting off the supply of oil at night or at other times it is simply necessary to turn the reservoir so as to move the ports *a* and *g* out of line, and thus interrupt the communication between the reservoir and the interior of the spindle.

In oil-cups as usually constructed but one valve is provided both for regulating and stopping the supply of oil, and in this case the valve must be carefully adjusted after each stoppage of the flow, thus causing much annoyance and requiring the exercise of much care on the part of the attendant.

Although the regulating-valve is preferably carried by the spindle, this is not absolutely necessary. For instance, in Fig. 5 I have shown a construction in which the valve is carried by the cup or reservoir.

I claim as my invention—

1. The combination, in an oil-cup, of the fixed spindle having an outlet-port therein and a tube fitting over said spindle, there being a port in said tube laterally in line with the port of the spindle, an oil-reservoir carried by the tube, and an independent regulating-valve, the whole so arranged that the flow of oil from the reservoir can be cut off by turning the tube independently of the regulating-valve, substantially as specified.

2. The combination, in an oil-cup, of the fixed spindle having an outlet-port therein and a tube fitting over said spindle, there being a port in said tube laterally in line with the port of the spindle, an oil-reservoir carried by the tube, and an independent regulating-valve within the fixed spindle and adapted to a seat therein, the whole so arranged that the flow of oil from the reservoir can be cut off by turning the tube independently of the regulating-valve, substantially as specified.

3. The combination, in an oil-cup, of the fixed spindle, there being an outlet-port therein, a tube provided with a port and fitting over said spindle, with an oil-reservoir, and an independent regulating-valve, the whole so arranged that the flow of oil from the reservoir can be cut off independently of the regulating-valve, substantially as specified.

4. The combination, in an oil-cup, of the hollow tapering spindle and regulating-valve, an oil-reservoir with a tube surrounding the spindle, said tube and spindle having independent ports for cutting off the flow from the reservoir, a pressure-nut on the upper end of the spindle, and a spring tending to keep the reservoir in close contact with the spindle, substantially as specified.

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

EDWARD M. GRACE.

Witnesses:
WILLIAM D. CONNER,
HARRY SMITH.