

(No Model.)

W. M. HERRICK.
OIL CUP.

No. 440,771.

Patented Nov. 18, 1890.

Fig. 1.

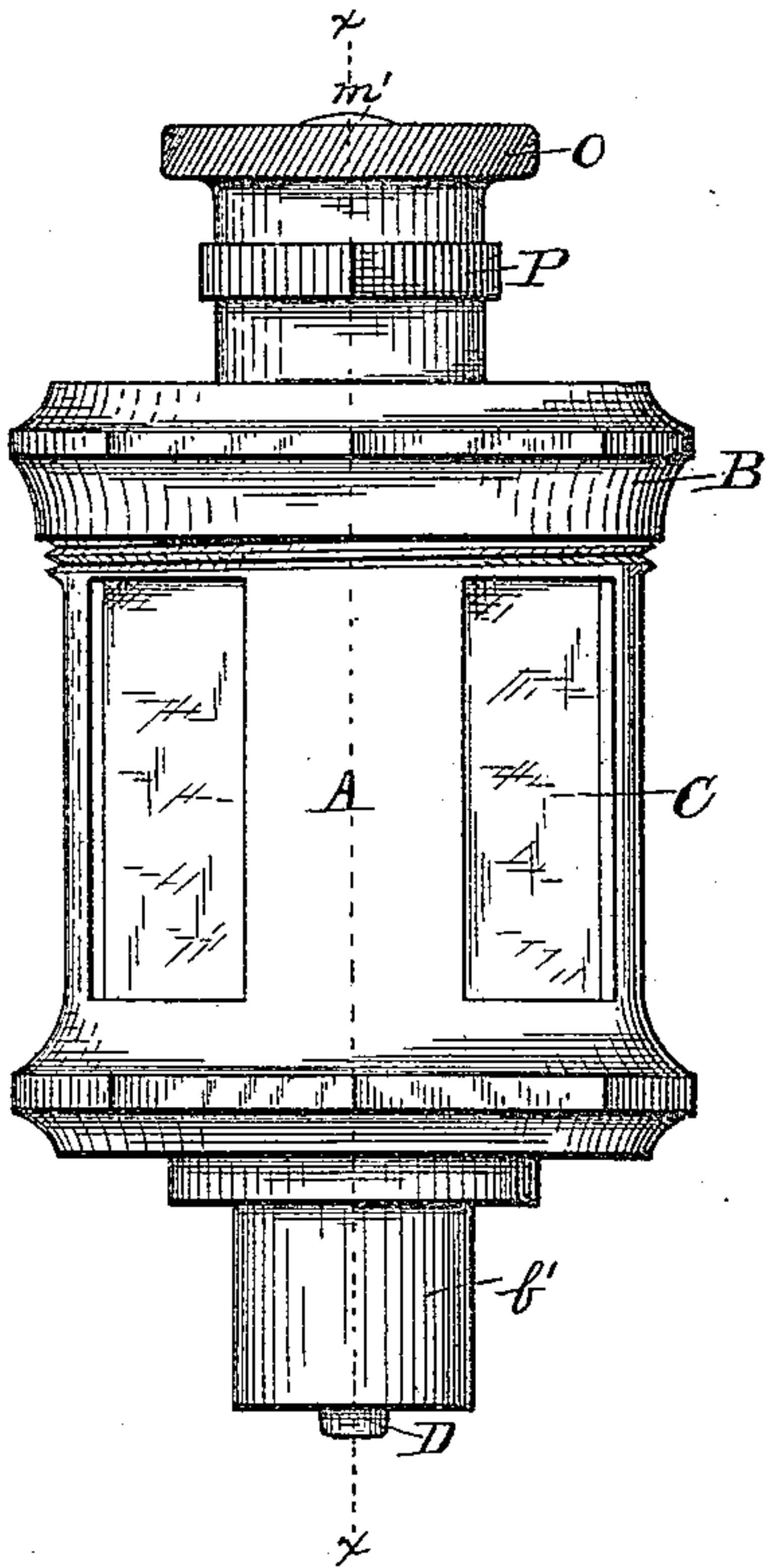


Fig. 2.

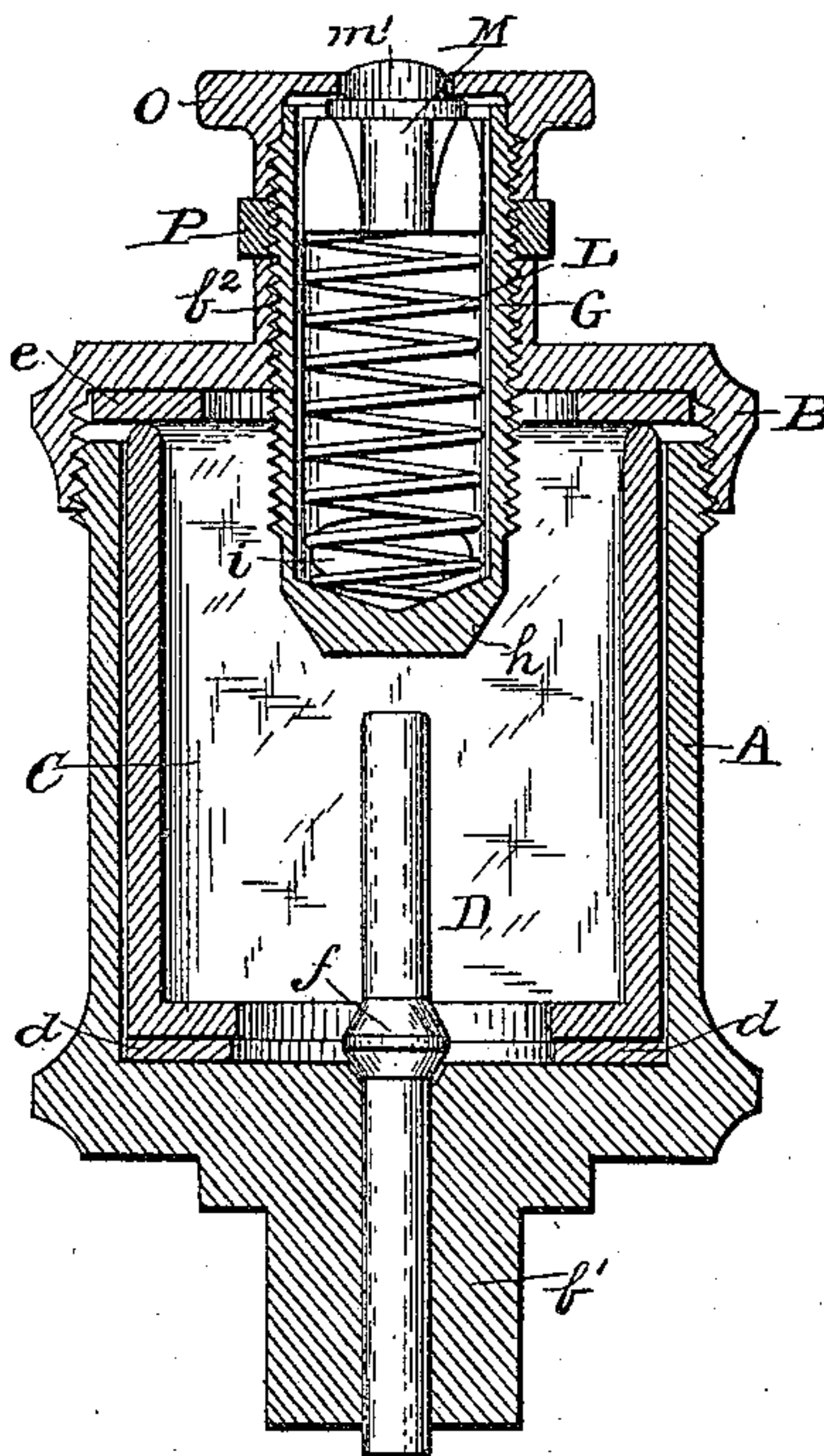


Fig. 3.

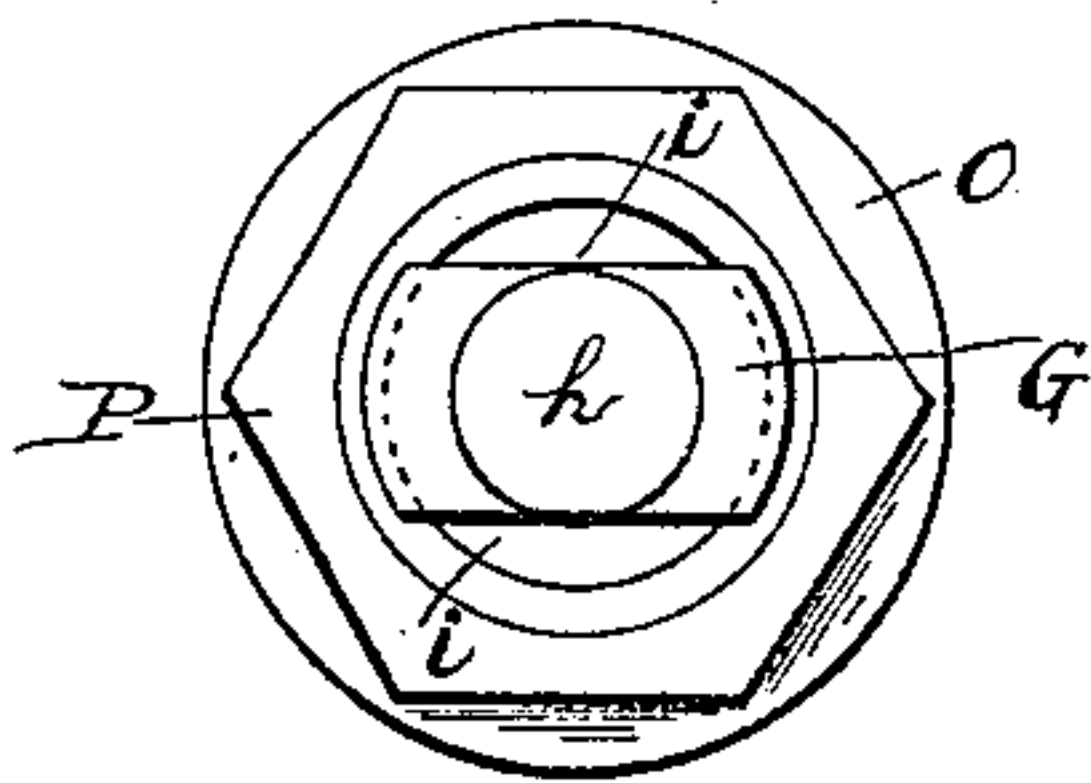
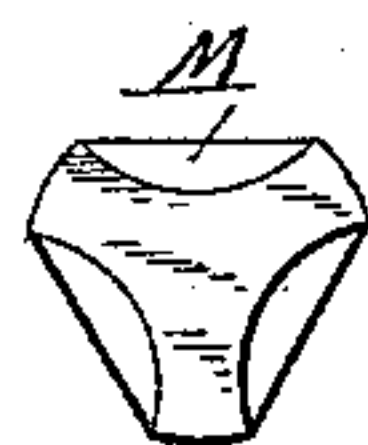


Fig. 4.



Witnesses

Joseph Blackwood.
Albert B. Blackwood.

Inventor

Whiting M. Herrick
by W. H. Coolidge
Attorney

UNITED STATES PATENT OFFICE.

WHITING M. HERRICK, OF SAYRE, PENNSYLVANIA.

OIL-CUP.

SPECIFICATION forming part of Letters Patent No. 440,771, dated November 18, 1890.

Application filed May 24, 1890. Serial No. 353,084. (No model.)

To all whom it may concern:

Be it known that I, WHITING M. HERRICK, a citizen of the United States, residing at Sayre, in the county of Bradford and State of Pennsylvania, have invented certain new and useful Improvements in Oil-Cups; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to that class of oil-cups for locomotive-engines having a spindle-valve which is operated by the motion of the engine to admit a supply of oil to the joints of the connecting-rods and closed when the engine is not in motion.

The principal object of my improvements is the construction of a cup and valve with which can be used any grade of oil, however heavy.

It is customary to use on some railroads, especially on coal and freight engines, a heavy black oil which thickens as it becomes cold, and which in cold weather is nearly solid.

My invention consists of a spindle-valve which works freely in the body of the oil that fills the cup, and thus keeps it stirred without any inclosure, tube, or chamber for the said valve within the cup to separate the body of the oil from the valve and spindle.

My invention further consists in combining with the spindle-valve a particular form of filling, feeding, and regulating device for filling the cup and regulating the throw of the valve and controlling the amount of feed of the oil to the connecting-rods; and, finally, the invention consists of a novel construction of an oil-cup considered as an entirety.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is an exterior view of the cup in elevation; Fig. 2, a sectional view on the line *xx* of Fig. 1, and Figs. 3 and 4 details.

Referring to the drawings, A is a metal open-work casing, provided with a screw-cap B and a bottom boss *b'*.

C is a glass cup placed within the casing, resting on a leather washer *d*, and having a leather top washer *e* between its rim and screw-cap. The cup has a central opening at the bottom.

D is a spindle provided with a conical-

shaped valve portion *f* about midway of its length. One arm of the spindle extends through the boss *b'* and the other arm into the glass cup, while the valve part *f* rests upon the bottom of the casing.

G is a hollow plug externally threaded except at its lower end *h*, which end is smooth and cone-shaped, closed at its extremity, but provided on each side with a passage *i* to admit of the escape of oil from the plug into the cup. The plug screws into the cap B through an internally-threaded boss *b''*.

L is a spiral spring placed within the plug G.

M is a valve, also placed within the plug and resting on the spiral spring and provided with a stem *m'*, which extends through the cap O of the plug.

P is a jam-nut on the screw-plug, the function of which is to hold the screw-plug in place when the latter is set in the desired position to regulate and control the throw of the spindle-valve. Oil is supplied to the glass cup by pressing the spout of an oil-can against the stem *m'* of the valve M, which forces that valve down until the spout enters the plug. When the cup is filled and the spout withdrawn, the valve M is forced back and held closed by the spiral spring L.

The spindle-valve is moved freely up and down by the motion of the engine, and thus permits the oil to escape through the bottom of the casing to the crank-pin or joint of connecting-rods; but the extent of movement of the valve and the consequent amount of flow of oil out of the cup is regulated and controlled, as before stated, by the screw-plug, which can be set at different distances from the spindle. It will be seen that no other seat than the bottom of the casing is provided for the spindle-valve, and that the spindle above the valve extends well into the cup, and has nothing between it and the oil, so that the oil has free access to the valve and is constantly stirred by the spindle. This is a great advantage, as above set forth, when black oil or other oils that are thick and are still more thickened by cold are used. It will be seen, also, that, however high the regulating-plug is set, oil can still be freely supplied to the cup without disturbing the plug, owing to the passages *i* being placed at the bottom of the plug. It will also be seen that this

regulating device, as well as the spindle-valve, can be readily applied to other cups of ordinary form without necessitating much, if any, change.

5 Having thus described my invention, what I claim is—

1. In an oil-cup having its spindle-valve seated in the bottom of the oil-chamber, the combination therewith of the adjustable hol-
10 low plug having the discharge oil opening or openings arranged in its sides near the lower end thereof, permitting a maximum adjustment in height of the plug, accordingly affecting the control of the valve without inter-
15 ference with the discharge of the oil, substantially as set forth.

2. The combination, with the oil-cup having upon its lower end an apertured boss and

upon its upper end an internally-threaded outer boss, of the spindle having equidis- 20
tantly from its ends a valve, and projecting up into the oil-chamber of said cup, the hollow valved plug projecting downward into said chamber and engaging said threaded boss, said plug being fitted with a cap and 25
having in its sides near the lower end thereof the oil-discharge openings, and the jam-nut engaging said plug and resting upon the outer end of said threaded boss, substantially as specified. 30

In testimony whereof I affix my signature in presence of two witnesses.

WHITING M. HERRICK.

Witnesses:

JOSEPH D. LUCE,

A. S. KOCH.