(No Model.)

E. S. RITCHIE.

LUBRICATOR.

No. 358,943. Patented Mar. 8, 1887.

Fig 1

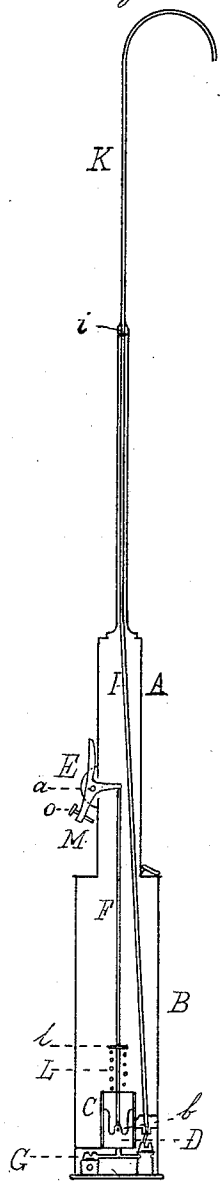


Fig 3

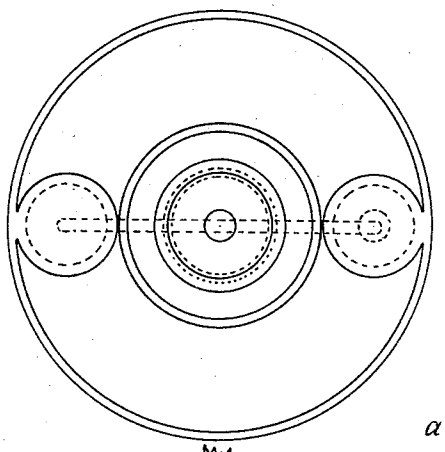


Fig 4

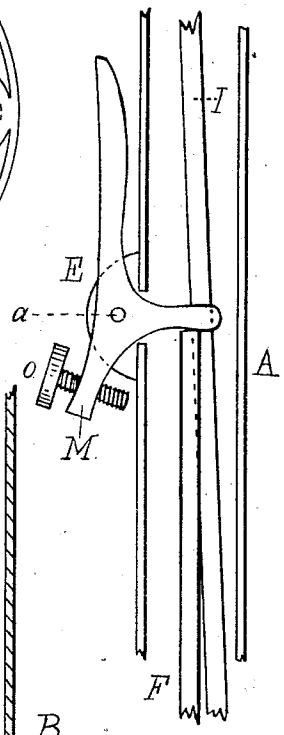
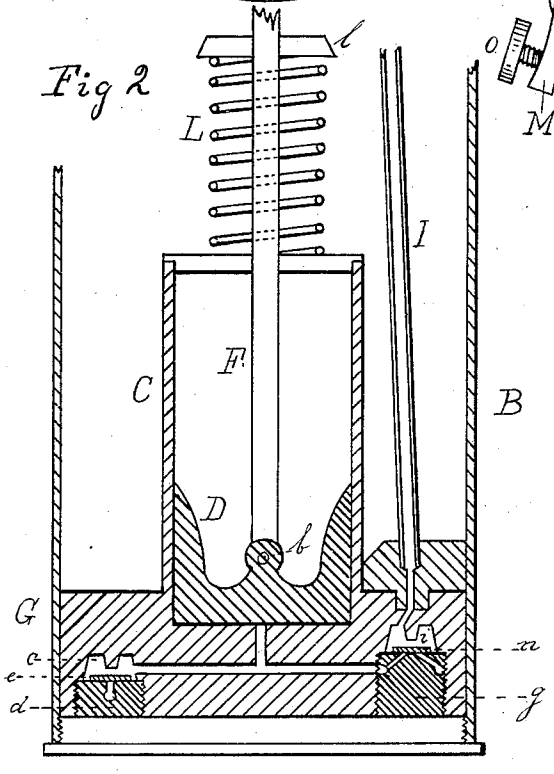


Fig 2



Witnesses
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UNITED STATES PATENT OFFICE.

EDWARD SAMUEL RITCHIE, OF NEWTON, MASSACHUSETTS.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 358,943, dated March 8, 1887.

Application filed June 26, 1886. Serial No. 206,318. (No model.)

To all whom it may concern:

Be it known that I, EDWARD SAMUEL RITCHIE, a citizen of the United States, and residing at Newton, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Lubricators; and I hereby declare the same to be described in the following specifications and represented in the accompanying drawings, of which—

Figure 1 is a vertical section. Fig. 2 is a vertical section of the lower part of the reservoir. Fig. 3 is a top view of the force-pump. Fig. 4 is a vertical section of the hand-pipe and the lever.

In carrying out my invention I combine a hand-pipe, A, to which, at its lower end, is connected a reservoir, B, for oil, and a force-pump, C, placed within the reservoir, with a piston, D. A bent lever, E, has its fulcrum *a* attached to the hand-pipe, its shorter arm bearing upon the upper end of a connecting-rod, F, which rod is hinged at its lower end to the pump-piston at *b*. The longer arm of the lever is in position, so that the force required to depress the piston can be exerted by the hand of the operator while holding the hand-pipe. The base-plate of the pump G has on one side of the cylinder a valve-chamber, *c*, closed by a screw, *d*, bearing a valve, *e*. Holes are drilled for the admission of oil from the reservoir into the pump, raising the valve *e* in its flow. A valve-chamber, *i*, is also made in the base-plate, and is closed by a screw, *g*, which bears a valve, *n*. Holes are drilled for the delivery of oil from the pump, raising the valve *n* in its flow. A conducting-tube, I, passes from the base-plate through the hand-pipe to the cap *i*.

A delivery-pipe, K, curved at its upper end, similar to other lubricators in use, is attached by screws to the cap *i* on the upper end of the hand-pipe.

I place around the connecting-rod a spiral spring, L, which rests upon the cover of the pump-cylinder and presses against a flange upon the rod with force enough to raise the piston when the pressure of the hand is removed from the lever. The lever E has a projecting arm, M, bearing a thumb-screw, *o*, by the adjustment of which the length of the stroke of the piston of the force-pump, and, consequently, the quantity of oil delivered at each stroke can be regulated or changed, as desired.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. In a lubricator, the combination of a hand-pipe, oil-reservoir, and delivery-pipe, a force-pump inclosed in the reservoir with piston connected with a bent lever, the fulcrum of which is attached to the hand-pipe, an inlet-valve chamber with valves for the passage of oil from the reservoir to the pump, an exit-valve chamber with valve, and a tube from the pump passing through the reservoir and hand-pipe connected with the delivery-pipe, substantially as set forth.

2. In a lubricator, the combination of a hand-pipe, reservoir, delivery-pipe, force-pump, valve-chambers with valves, connecting-tube, bent lever attached to the hand-pipe, with an adjusting-screw for regulating the length of the stroke of the piston, substantially as set forth.

EDWARD SAMUEL RITCHIE.

Witnesses:
RICHARD C. WHITFORD,
A. M. RITCHIE.