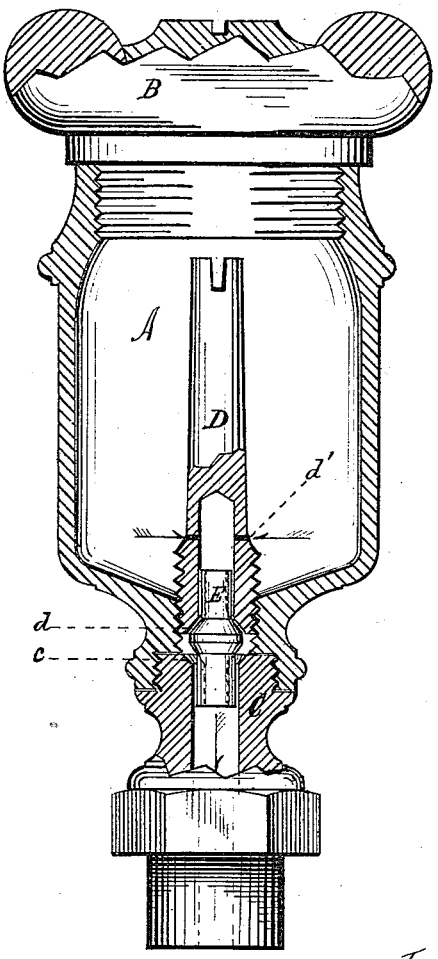
J. RICHTER & G. MERKEL.

Lubricator.

No. 165,756. Patented July 20, 1875.



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JOSEPH RICHTER AND GUMAL MERKEL, OF CINCINNATI, OHIO.

IMPROVEMENT IN LUBRICATORS.

Specification forming part of Letters Patent No. **165,756**, dated July 20, 1875; application filed May 4, 1875.

To all whom it may concern:

Be it known that we, JOSEPH RICHTER and GUMAL MERKEL, both of Cincinnati, county of Hamilton and State of Ohio, have invented a new and useful Improvement in Tallow Lubricators; and do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawing making a part of this specification.

The nature of our invention relates to that class of lubricators used for supplying the lubricating material to steam-cylinders or other machinery, and which acts by intermitting pressure of steam or other medium used in said machine.

In construction our invention is as follows: A is the main chamber or receptacle for the lubricator, which is surmounted with a cap, B, closing the same. To the lower end of part A is screwed the hexagon stem C, its upper end being provided with a concave seat, *c*. Within the chamber A, and screwed into its lower opening, is the adjusting-stem, D. This has a concave seat, *d*, below. This cavity is extended upward some distance, where a number of small openings, *d'*, are made, whereby communication is established with the chamber A. These openings are placed a sufficient distance from the junction of stem D with chamber A, in order that any sediment that may be deposited will not obstruct the flow of the lubricating material. The upper end of stem D has a notch cut for the application of a screw-driver for its adjustment. A small double-seated valve, E, is placed between seats *d* and *c*. This valve has two stems entering and fitting snugly the interior of the parts D and C, forming guides for said valves, insuring its being accurately seated at every movement. These guiding-stems have a number of recesses cut, as shown by dotted lines, which allows the lubricator flowing space.

From the above the operation of our invention becomes obvious. Any suitable lubricating material, such as tallow, is placed in the chamber A, and the cap B screwed on air-tight. Should steam be on at the time the tallow is supplied the pressure will keep the valve E elevated against seat *d*, thus preventing the escape of the steam without the necessity of any further stop-cock or valve. On the closing down of cap B an equilibrium is formed between the chamber A and cylinder. Should the engine be stopped at this time the valve E will drop on the seat *c*, preventing the flow of tallow. On the starting of the engine, at each stroke of the piston the valve E will move up and down, taking in a quantity of tallow in proportion to the movement of valve E, the extent of which movement is adjusted by stem D being elevated or depressed. On the stopping of the engine the movement of valve E is also stopped, with the result already stated.

The advantages of this lubricator are its simplicity in the saving of any stop-cock or valve, its efficiency in the ease with which it can be adjusted to any given quantity of supply, and in supplying the chamber A without stopping the engine.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The adjustable sleeve D, having concave valve-seat *d* and inlets *d'*, in combination with double-seated valve E and concave seat *c* within stem C, substantially as and for purpose hereinbefore described and set forth.

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