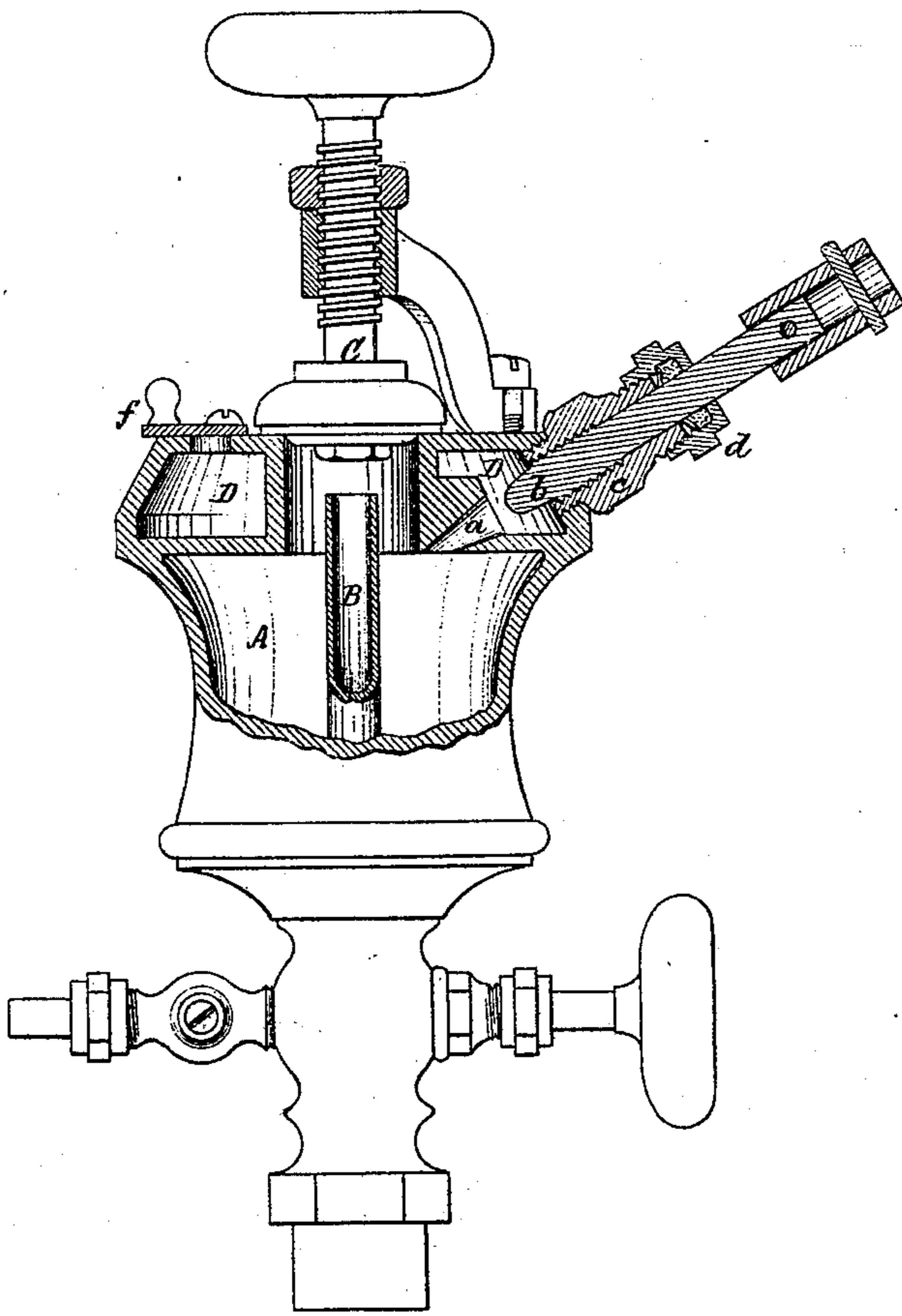


I. Dreyfus,

Lubricator.

No. 109118.

Patented Nov. 8. 1870.



I. Dreyfus
by atty A. Belok.

WITNESSES.

J. Bailey
John Buckley

UNITED STATES PATENT OFFICE.

ISIDORE DREYFUS, OF NEW YORK, N. Y.

IMPROVEMENT IN LUBRICATORS.

Specification forming part of Letters Patent No. **109,118**, dated November 8, 1870.

To whom it may concern:

Be it known that I, ISIDORE DREYFUS, of the city, county, and State of New York, have invented certain new and useful Improvements in Lubricators, of which the following is a specification:

My invention relates to that class of lubricators in which the feed of oil is effected by means of steam, which enters and condenses in the lubricator, and thus causes the displacement of a corresponding quantity of oil, which overflows and passes down one or more tubes leading from the lubricator to the part to be lubricated.

The steam for this purpose is usually the live steam of the steam-cylinder, and so long as steam is admitted to the cylinder the lubricator does its work well; but on certain occasions—as, for instance, in the case of a locomotive moving on a down grade—steam is completely shut off, while the parts to be lubricated are still in full motion, and the lubricator is therefore rendered inoperative and useless at the very time when its services are most required.

My object is to overcome this difficulty, so that the oil may be fed from the cup, although the steam is not admitted; and to this end my invention consists in providing a lubricator of the kind above referred to, and of otherwise ordinary or suitable construction, with an auxiliary oil-chamber, communication between which and the condensing-chamber, or the oil-discharging tube of the lubricator, is regulated by means of a valve, so that when steam is shut off, and the oil in the condensing-chamber consequently ceases to flow, the valve may be opened to allow the oil in the auxiliary chamber to flow through the discharge-tube of the lubricator in the desired quantity, and thus keep the working parts of the steam-cylinder or other portions of the engine properly lubricated.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which the same is or may be carried into effect by reference to the accompanying drawing, which represents a vertical central section of the lubricator made in accordance with my invention.

A is the main oil cup or chamber, in which

the steam is condensed. B is the tube or conduit through which the steam enters and the oil is discharged, the discharge being occasioned, as above stated, by the condensed steam, which raises the level of the oil, and causes it to overflow the tube. C is the valve for closing the top of the chamber A. All these parts are constructed in the manner usual in lubricators of this kind, and require no further explanation.

With the chamber A and tube B, I combine, however, an auxiliary oil-chamber, D, which in this instance is located above the chamber A, although its location may be varied without departure from the principle of my invention. This chamber communicates, through a passage or opening, *a*, with the chamber A or tube B, this passage being provided with a valve, *b*, by the opening or closing of which the flow of oil from the auxiliary chamber is regulated.

The stem of the valve is provided with a screw-thread, to engage with a corresponding female screw in the bearing *c*, and it passes out from the lubricator through a stuffing-box, *d*, of the usual construction.

The stem is provided with a handle of any length and size, to bring it conveniently under the hand of the engineer of the locomotive or other engine with which the lubricator is used.

The chamber D is cast in one piece with the remainder of the lubricator, or may be cast or otherwise formed separately, and afterward attached thereto. In the top of the chamber D an opening, closed by a cap, *f*, is provided for pouring in the oil.

The operation of the device requires but little explanation. If, for instance, the lubricator be attached to the steam-cylinder of a locomotive in the usual way, so long as steam is let on, the valve *b* of the auxiliary oil-chamber is kept closed, because the steam enters and is condensed in the chamber A, and consequently raises the level of the oil, so as to cause it to overflow and pass down the tube B, keeping the cylinder well lubricated; but when the locomotive is going down grade, for instance, and steam is shut off, the flow of oil from the chamber A ceases, and this portion of the lubricator becomes inoperative. Un-

der these circumstances the engineer, for the purpose of oiling the cylinder, opens the valve *b*, and the melted tallow or other lubricant flows from the auxiliary chamber *D* into the chamber *A*, and raises the level of the oil in the latter, so as to cause the desired quantity of the lubricant to pass down through the discharge-tube to the parts to be lubricated. This may continue so long as steam is shut off.

Of course, when steam is let on, the lubricator again becomes self-acting, and the supply from the auxiliary chamber, being no longer necessary, is stopped by closing the valve.

Having now described my invention, and the manner in which the same is or may be carried into effect, what I claim, and desire to secure by Letters Patent, is—

In a lubricator substantially such as described, the combination, with the condensing-chamber and discharge tube or tubes, of an auxiliary oil-chamber and valve for regulating the flow of oil or other lubricant from the same to the said discharge tube or tubes, substantially as and for the purposes set forth.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

ISIDORE DREYFUS.

Witnesses:

WM. G. ULERY,
J. G. DREYFUS.