No. 656,616. Patented Aug. 21, 1900.

G. S. WEBSTER.

FEED VALVE FOR LUBRICATORS.

(Application filed Apr. 13, 1900.)

(No Model.)

Fig. 1.

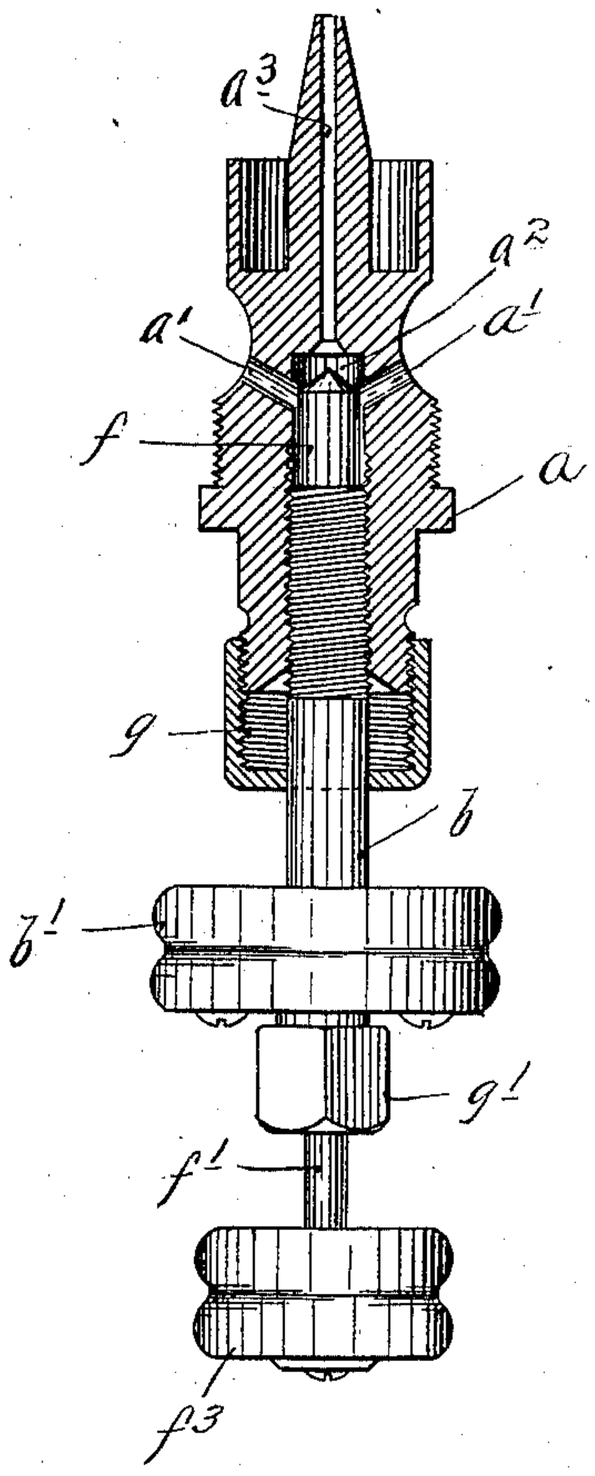
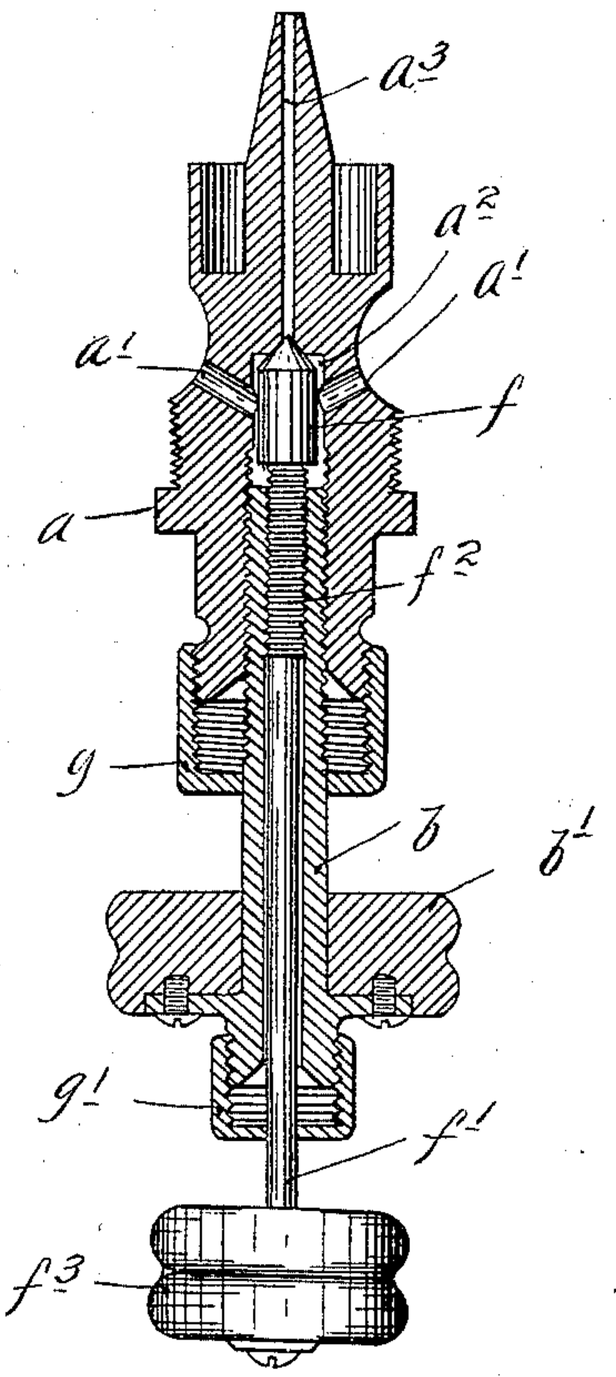


Fig. 2.



Witnesses.
Harry Kilgore,
Robert Otto

Inventor.
George S. Webster
By his Attorneys,
Williamson & Merchant

UNITED STATES PATENT OFFICE.

GEORGE S. WEBSTER, OF MINNEAPOLIS, MINNESOTA.

FEED-VALVE FOR LUBRICATORS.

SPECIFICATION forming part of Letters Patent No. 656,616, dated August 21, 1900.

Application filed April 13, 1900. Serial No. 12,700. (No model.)

To all whom it may concern:

Be it known that I, GEORGE S. WEBSTER, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Feed-Valves for Lubricators; 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 particularly to cylinder-lubricators for locomotives, and has for its object to provide an improvement in the valve mechanism for giving a graduated feed of the oil.

To the above ends my invention consists of the novel devices and combinations of devices hereinafter described, and defined in the claim.

This invention, while especially designed for use in connection with cylinder-lubricators for locomotives, is capable of general use wherever a graduated feed of oil or other liquid is desired.

In the cylinder-lubricators of locomotives the feed-valve is required to be set in certain determined positions, so as to give a certain number of drops per minute, depending largely upon the work which is being performed. All the standard lubricators are provided with feed-valves by means of which this may be accomplished; but it is incident to such construction that in order to close the oil-passage and stop the feed of the oil temporarily, as should be done when the engine is standing still, the determined position for the feed-valve to produce the desired number of drops to the minute is lost. Hence it is that engineers in making short stops usually, and in making long ones frequently, leave the feed-valves open, and thus waste oil. By my invention, which in its preferred form is illustrated in the accompanying drawings, I make it possible to set the feed-valve for any desired number of drops per minute, to close the valve temporarily, and upon opening the valve to its set limit to reëstablish the previously-determined feed of the oil.

In the drawings like characters indicate like parts throughout both views.

Figure 1 is a view, partly in side elevation and partly in vertical section, showing a portion of a lubricator such as used to feed the oil to locomotive-cylinders; and Fig. 2 is a similar view to Fig. 1, but showing the parts in different positions.

The letter a indicates the valve-seat portion of the lubricator, the other well-known portions of the lubricator being omitted. The oil is fed through lateral perforations a' into a small chamber a^2, from which an oil-passage a^3 leads upward to the sight-tube. (Not shown.)

Working with screw-threaded engagement in the lower end of the valve-seat casting a is a sleeve b, having at its lower end a handpiece b'. The feed-valve proper, f, opens and closes the lower end of the oil-passage a^3, and its stem f' has screw-threaded engagement at f^2 with the upper end of the sleeve b, the said stem extending axially through said sleeve b and having at its lower end a handpiece f^3. As shown, the lower end of the casting or body a is provided with a stuffing-box g, which forms a tight joint with the sleeve b, and the lower end of the sleeve b is provided with a stuffing-box g', which forms a tight joint with the stem f'. The sleeve b and the stem f' in effect constitute a divided stem for the valve f.

The operation of the device is as follows: The valve f is by its stem f' screwed downward against the upper end of the sleeve b, which acts as a stop therefor. Then by manipulating the handpiece b' the sleeve b, stem f', and valve f are turned together as an entirety, and by such adjustment the valve f may be set more or less open, so as to give the desired flow of oil or number of drops per minute thereof. In this construction it will of course be understood that the oil is delivered through the passage a' under sufficient pressure to cause the same to flow upward through the oil-passage a^3. In Fig. 1 the valve f is shown as screwed against the end of the sleeve b, as above described, but is shown as opened wider than would be required. To close the passage a^3 and stop the feed of the oil, it is only necessary to turn the valve-stem f and handpiece f^3, without moving the sleeve b, until the valve f has been forced into contact with the lower extremity of the feed-passage a^3, as shown in Fig. 2.

When it is desired to again open the feed-passage a^3, the valve f may, by means of the stem f' and handpiece f^3, be screwed back into its extreme open position, as limited by its engagement with the adjacent end of the sleeve b. The valve when thus opened will be moved to its properly-adjusted position and the regulated flow of oil will be again permitted. At the same time the readjustment of the valve may be at any time easily accomplished by turning the sleeve b.

It is evident that with this device the engineer will find no excuse for not cutting off the feed of the oil when the engine comes to a standstill. It will be understood, also, that the device above described is capable of considerable modification within the scope of my invention.

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

In a lubricator or similar device, the combination with a body having a feed-passage, of a valve controlling said feed-passage, provided with a two-part stem, the exterior member of which stem is in the form of a sleeve having screw-threaded engagements with the interior stem-section and with said body, and movable with respect to the feed-passage in said body which is controlled by said valve, and which exterior or sleeve member acts as a stop to variably limit the opening movement of said valve with respect to said feed-passage.

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

GEORGE S. WEBSTER.

Witnesses:
HARRY KILGORE,
F. D. MERCHANT.