

M. W. Ward's Improved Lubricating Apparatus for Steam Engines.

118078

PATENTED AUG 15 1871

Fig. 1.

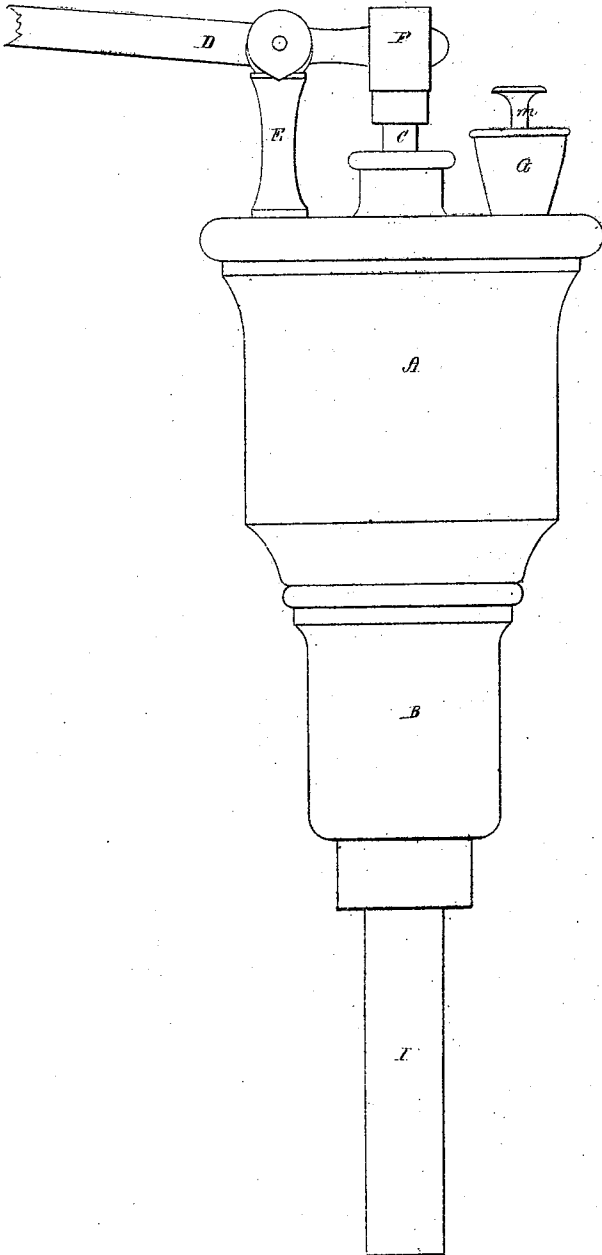
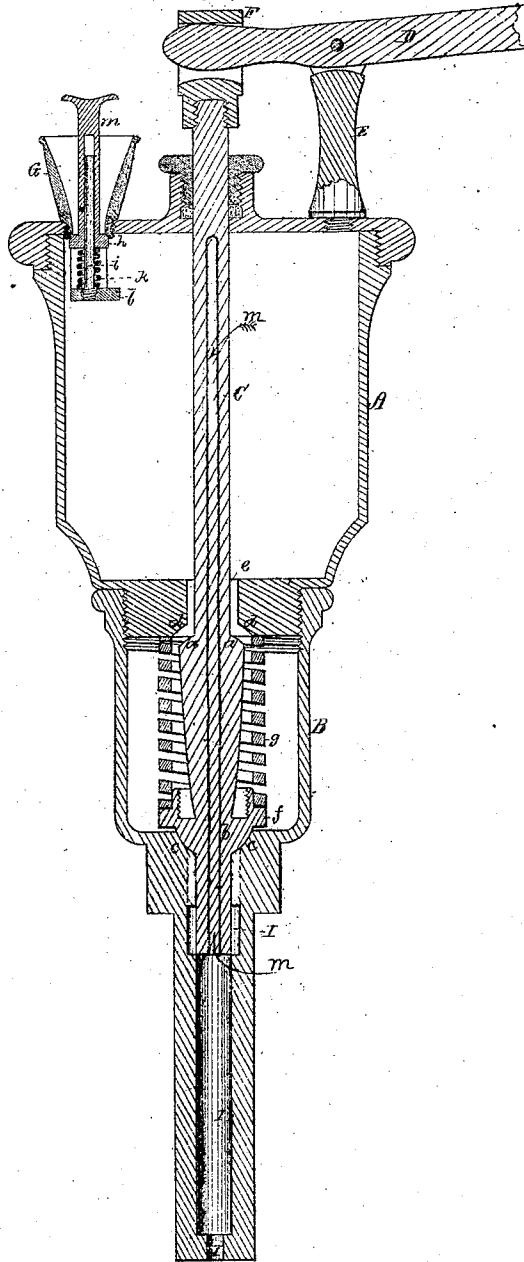


Fig. 2.



Witnesses

S. A. Piper
L. N. Moller.

M. W. Ward.

by his attorney,

R. H. Day

UNITED STATES PATENT OFFICE.

MOSES N. WARD, OF SOMERVILLE, MASSACHUSETTS, ASSIGNOR TO HIMSELF
AND FRANKLIN FRIEND, OF SAME PLACE.

IMPROVEMENT IN LUBRICATING APPARATUS FOR STEAM-ENGINES.

Specification forming part of Letters Patent No. 118,078, dated August 15, 1871.

To all whom it may concern:

Be it known that I, MOSES N. WARD, of Somerville, of the county of Middlesex and State of Massachusetts, have invented an Improved Lubricating Apparatus for Steam-Engines; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a side elevation, and Fig. 2 a vertical section of it.

In such drawing, A denotes an oil-reservoir screwed on the top of another or auxiliary chamber or vessel, B. There extends vertically and axially through the two vessels A B a valve-stem, C, carrying two valves, *a b*, arranged in it as shown, and within the auxiliary vessel B. The lower of these valves is to operate with a seat, *c*, at the bottom of the vessel B, the upper valve being to also operate with a corresponding seat, *d*, in the top of such vessel or lower part of a passage, *e*, which opens out of the bottom of the vessel A into the vessel B and around the valve-stem. There is on the said stem a shoulder, *f*, to support a helical spring, *g*, which encompasses the valve-stem, rests against the top of the auxiliary vessel, and operates to force down the lower valve upon its seat, the upper valve at the same time being pressed away from its seat. A lever, D, pivoted to a standard, E, (erected on the top of the vessel A,) and extended through a head, F, screwed upon the valve-stem, serves to enable a person to raise the valve-stem so as to elevate the upper valve up to its seat. A small filling-mouth or conical tunnel, G, is fixed on the top of the vessel A, opens through such, and is provided with a valve, *h*, to open downward, the stem *i* being extended up through the tunnel and provided with a spring, *k*, for forcing the valve up to its seat. The spring, arranged as shown, is supported on a bracket, *l*, projecting from the top of the vessel A. The valve-stem is made tubular or chambered, as shown at *m*, from its lower end nearly up to its top, the same being for the admission of steam into the part within

the chamber, in order to melt the grease or talow that may be placed therein.

The lubricating apparatus so made is designed for use on the steam-chest of a locomotive or stationary steam-engine, it being applied thereto so that oil or grease may be discharged into the chest and from the apparatus as circumstances may require. The vessel B is to gauge the amount to be discharged at any time from the main reservoir A.

When the valve-stem is at its lowest position the upper valve will be off its seat and the lower valve be on its seat. The oleaginous matter of the reservoir A will then be free to flow into the receiver B, and will do so until the latter may be filled with it. Now, in raising the valve-stem so as to lift the upper valve up to its seat and the lower valve off its seat, the fluid in the reservoir A will be estopped from flowing therefrom, and the charge in the receiver B will be free to and will escape from the same into the steam-chest.

There may be a conduit, I, fixed to the lower part of the receiver B, to lead the material therefrom to the point or place upon which it may be desirable to have it conducted.

I claim—

1. The improved lubricator, or combination and arrangement of the vessels A B, the valve-stem C, the valves *a b*, the valve-seats *c d*, the passage *e*, the shoulder *f*, and the spring *g*, all being to operate as described.

2. The combination of the steam-space or heating-chamber *m* with the valve-stem C, the two vessels A B, the two valves *a b*, and their seats *c d*, arranged as described.

3. The chamber *m*, arranged to extend from the lower part of the valve-stem up into the two vessels A B, as set forth, such chamber being combined with the said vessels, the valve-stem C, and its valves *a b*, and their seats *c d*, arranged as explained.

Witnesses:

MOSES N. WARD.

R. H. EDDY,
J. R. SNOW.