A. N. ALLEN & R. H. DEWEY.

Improvement in Lubricators for Steam Engines.

No. 122,982. Patented Jan. 23, 1872.

Fig. 1.

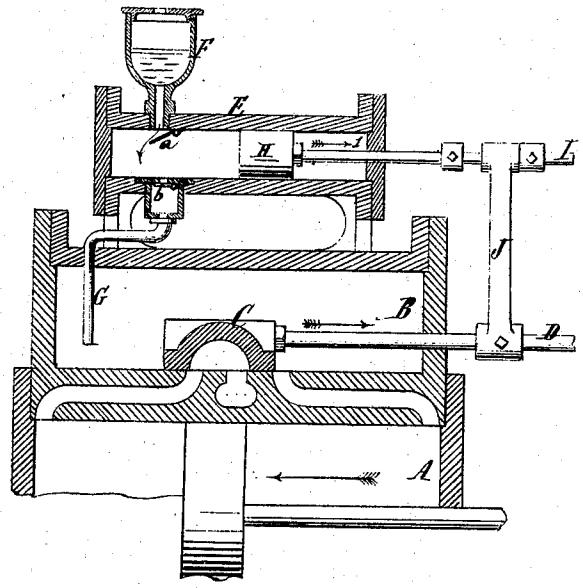
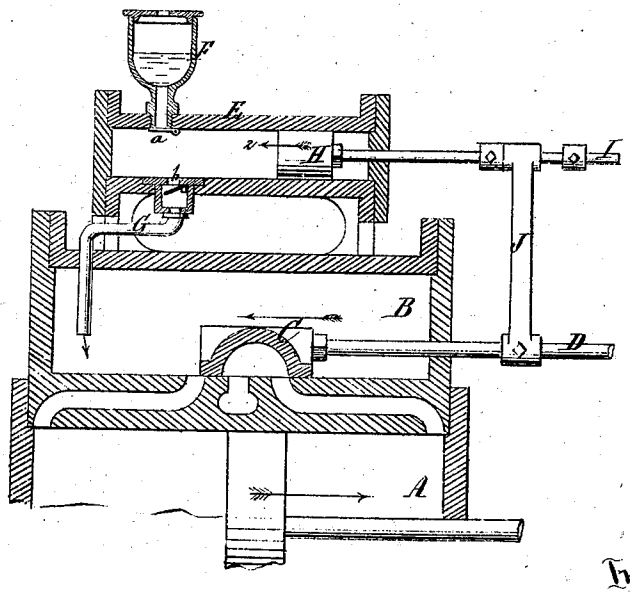


Fig. 2.



Witnesses.
E. F. Kastenhuber
Ernst Bilhuber.

Inventors.
Almon N. Allen
Rodney H. Dewey
per
Van Santvoord & Hauff
Attys

122,982

UNITED STATES PATENT OFFICE.

ALMON N. ALLEN AND RODNEY H. DEWEY, OF PITTSFIELD, MASS.

IMPROVEMENT IN LUBRICATORS FOR STEAM-ENGINES.

Specification forming part of Letters Patent No. 122,982, dated January 23, 1872.

To all whom it may concern:

Be it known that we, ALMON N. ALLEN and RODNEY H. DEWEY, of Pittsfield, in the county of Berkshire and State of Massachusetts, have invented a new and Improved Lubricator for Steam-Engines; and we do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a longitudinal vertical section of our invention, showing the working parts of the lubricating-pump in position to take oil from the oil-cup. Fig. 2 is a similar view of the same, showing the lubricating-pump in position to inject oil into the valve-chest.

Similar letters indicate corresponding parts.

This invention consists in the arrangement of a pump which connects by means of a valve with an oil-cup and by another valve with the steam-chest of an engine, while the pump-piston receives its motion from the valve-rod or from the same source which imparts motion to the valve-rod, in such a manner that whenever the steam-valve is in motion the pump-piston alternately draws oil from the oil-cup into the pump-barrel and then forces this oil into the valve-chest, and by these means a proper quantity of lubricating material is applied to the steam-valve, and at the same time no lubricating material is wasted.

In the drawing, the letter A designates a steam-cylinder, which is provided with a steam-chest, B, in which works the slide-valve C, motion being imparted to this slide-valve by means of a rod, D, from an eccentric on the crank-shaft, or in any other well-known manner. E is a pump-barrel, which may be fastened to the valve-chest in any desired position by any suitable means. This pump-barrel connects through a valve, *a*, with an oil-cup, F, and through a valve, *b*, with a pipe, G, that extends into the steam-chest, as shown. The valve *a* opens inward, and the valve *b* outward from the pump-barrel, and in this barrel moves a piston, H, the rod I of which connects by an arm, J, with the valve-rod D, or this piston-rod may be connected directly to the eccentric or other mechanism, imparting motion to the slide-valve. When the piston H in the pump-barrel moves in the direction of arrow 1 the valve *a* opens and the valve *b* closes, and a quantity of oil drawn from the oil-cup into the pump-barrel. When the piston H moves in the direction of the arrow 2 the valve *a* closes and the valve *b* opens, and the oil previously sucked into the pump-barrel is forced through the pipe G into the valve-chest.

If desired an oil-cup may be made to connect with the pump-barrel at either end, and the pump-barrel may be connected at both ends with the valve-chest, and in most cases this arrangement will be preferable in order to keep up a uniform supply of lubricating material to both ends of the valve-chest, and also to keep the valve evenly balanced. It will also be readily understood that by suitable mechanism the motion of the pump-piston may be regulated so that no more oil is thrown into the valve-chest than necessary to keep the steam-valve properly lubricated.

By our device the requisite quantity of oil for the lubrication of the steam-valve is injected into the valve-chest whenever the steam-valve is in motion, and when the valve is at rest the supply of oil stops, and no lubricating material is wasted.

What we claim as new, and desire to secure by Letters Patent, is—

The arrangement of a pump the piston of which receives its motion from the rod of the slide-valve, or from the same source which imparts motion to said slide-valve, said pump being connected with an oil-cup and with a pipe or channel leading to the steam-chest, substantially in the manner herein shown and described.

ALMON N. ALLEN.
RODNEY H. DEWEY.

Witnesses:
MYRON J. HORTON,
DWIGHT CHESTER.