G. McQUADE & N. S. AIRHART.

LUBRICATOR FOR LOCOMOTIVE DRIVER FLANGES.

APPLICATION FILED DEC. 2, 1910.

1,013,197. Patented Jan. 2, 1912.

Fig. 1.

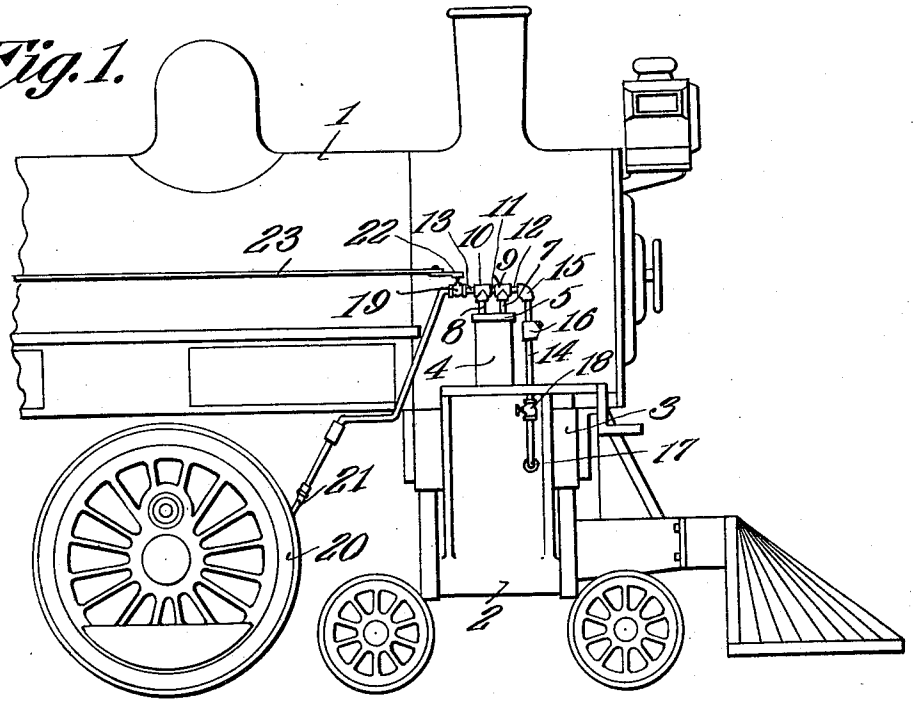


Fig. 2.

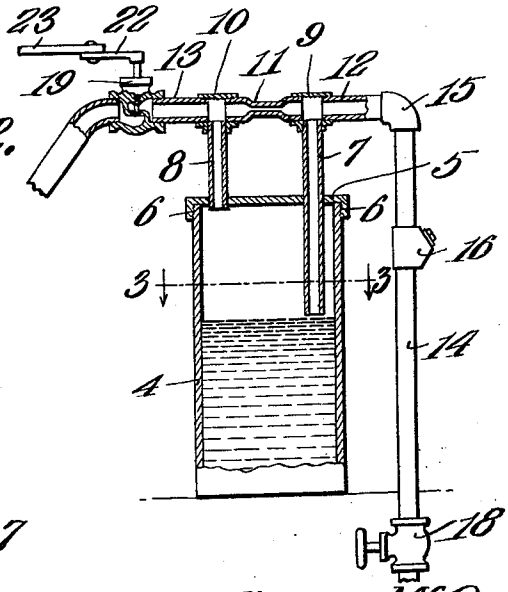
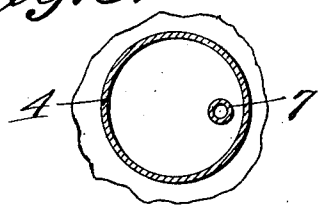


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE McQUADE AND NOAH S. AIRHART, OF TRENTON, MISSOURI.

LUBRICATOR FOR LOCOMOTIVE-DRIVER FLANGES.

1,013,197. Specification of Letters Patent. Patented Jan. 2, 1912.

Application filed December 2, 1910. Serial No. 595,321.

To all whom it may concern:

Be it known that we, GEORGE McQUADE and NOAH S. AIRHART, citizens of the United States, residing at Trenton, in the county of Grundy, State of Missouri, have invented a new and useful Lubricator for Locomotive-Driver Flanges, of which the following is a specification.

It is the object of this invention to provide a novel form of fluid-pressure-actuated means for applying oil to the wheels of a locomotive.

Another object of the invention is to provide means for dividing the oil into spray, and for delivering the spray against the flanges of the locomotive wheels.

In the drawings, Figure 1 is a side elevation, illustrating a portion of a locomotive, to which the invention is applied; Fig. 2 is a vertical section through the oiler proper, showing the general structure of the device, parts being in elevation; and Fig. 3 is a transverse section on the line 3—3 of Fig. 2.

In the accompanying drawings, the numeral 1 indicates a locomotive, the numeral 2 indicating the steam cylinder, and the numeral 3 the steam chest.

Disposed above the steam chest 3, and preferably secured thereto in upright position, is a receptacle 4, adapted to contain any suitable lubricant. The receptacle 4 is supplied with a closure 5, ordinarily threaded upon the receptacle, as shown at 6.

Extended through the closure 5 are two pipes 7 and 8, the pipe 8 terminating adjacent the lower face of the closure, and the pipe 7 extending downwardly to a point approximately half-way between the top and bottom of the receptacle. The upper ends of the pipes 7 and 8 are equipped with T's 9 and 10, respectively, the T's being united by a pipe 11. Extending into the T's 9 and 10, from opposite sides of the pipe 11, are pipes 12 and 13. The pipe 12 is connected, by means of an elbow 15, to a pipe 14, extended downwardly into communication with the steam chest 3, as shown at 17. In this pipe 14 there is an upwardly opening check valve 16, a cut-off cock 18 being interposed in the pipe 14 below the check valve 16. The check valve 16 permits the steam to pass up upwardly from the steam chest 3 into the receptacle 4, but prevents an opposite flow of steam from the receptacle into the steam chest. The cut-off cock 18 remains normally open, saving in the case of accident, whereupon the cock 18 may be closed in order to prevent escape of steam.

The pipe 13 is supplied with a needle valve 19, whereby the amount of oil which is delivered to the flanges of the wheel, may be regulated. This valve 19 is controlled by an operating member 22, to which a rod 23 is pivoted. This rod 23 extends rearwardly into the cab of the locomotive, and is ordinarily connected with the throttle (not shown), so that when the throttle is operated to start the locomotive, the supply of oil will be started simultaneously.

The pipe 13 is carried downwardly, along the side of the locomotive, and terminates in a nozzle 21, disposed in close relation to the flanges of the wheels 20.

The practical operation, the steam, passing from the steam chest 3 into the pipe 14, will enter the pipe 7 and impinge against the oil in the receptacle 4, breaking up the oil into finely divided particles. These finely divided particles of oil will pass outwardly through the pipe 8, a portion of the steam traversing the pipes 11 and 13, and serving to siphon the finely divided oil from the receptacle 4, and to force the oil through the pipe 13, against the flanges of the wheels.

Having described the invention, what is claimed is:—

1. The combination with the steam chest of a locomotive engine, of a pipe entering the chest and discharging against a wheel of the locomotive; an oil receptacle; spaced pipes branching from the first named pipe, and entering the receptacle; a valve in the first named pipe; and means for connecting the valve operatively with the throttle of the locomotive.

2. In a device of the class described, a pipe adapted at one end for connection with the steam chest of a locomotive, and at the other end discharging against the wheel of the locomotive; an oil receptacle; spaced pipes connecting the first named pipe with the interior of the receptacle, one of the last named pipes terminating adjacent the top of the receptacle, the other of said pipes being extended downwardly to a point between the top and the bottom of the receptacle; a valve in the first named pipe between the receptacle and the discharge end of said pipe; means for operatively connecting the valve with the throttle of the locomotive; and a check valve and a cut-off cock

in the first named pipe between the receptacle and the steam chest.

3. The combination with the steam chest of a locomotive engine, of a pipe entering the chest and discharging against a wheel of the locomotive; a valve in the pipe; means for connecting the valve operatively with the throttle of the engine; and an oil receptacle operatively connected with the pipe, whereby the steam, passing through the pipe, will carry with it, the oil contained within the receptacle.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

GEORGE McQUADE.
NOAH S. AIRHART.

Witnesses:
J. IVAN RHEA,
W. OSCAR SMITH.