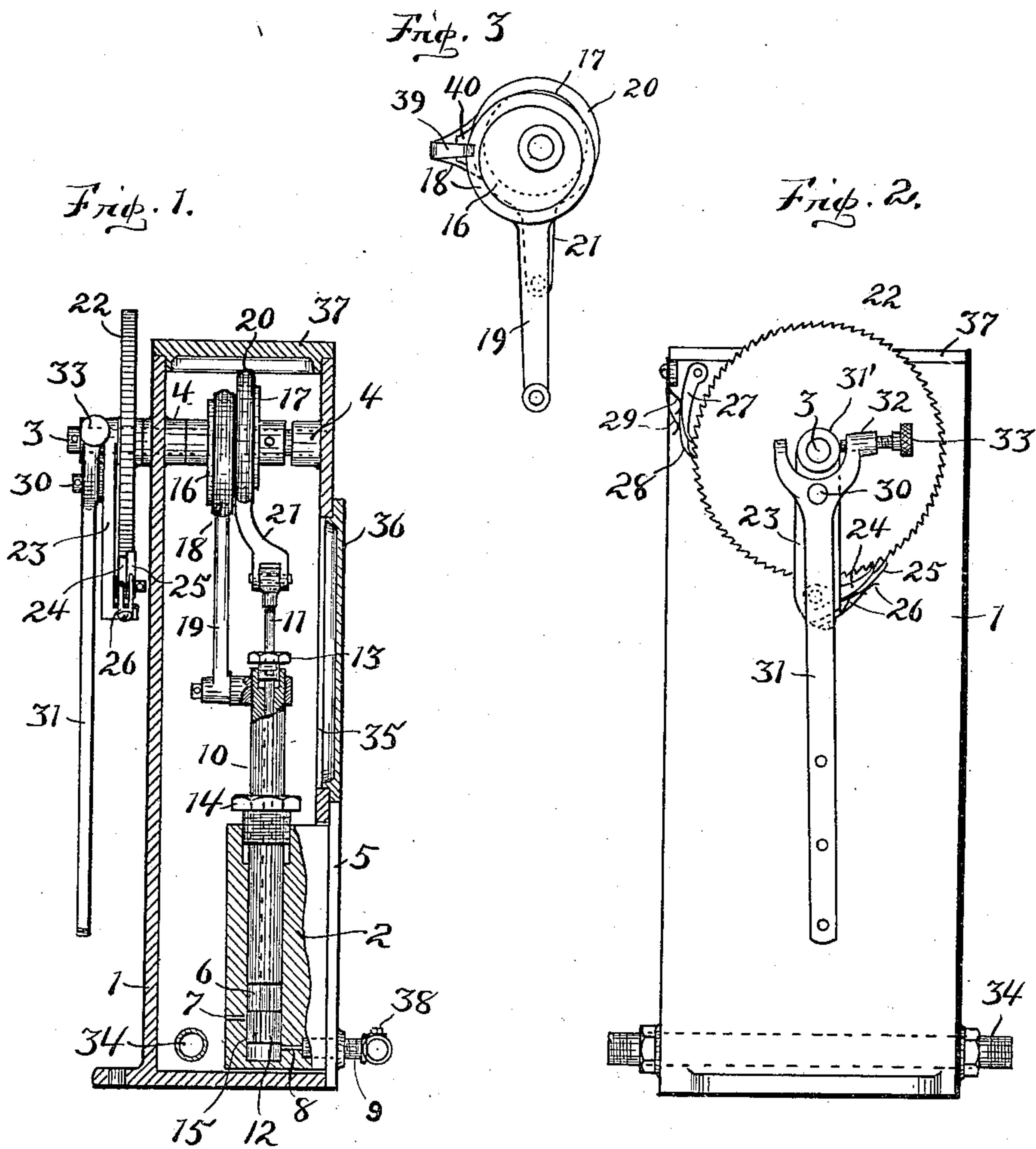


No. 889,248.

PATENTED JUNE 2, 1908.

S. A. LEHMAN.  
LUBRICATING OIL FEEDER.  
APPLICATION FILED JULY 23, 1906.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

SOLOMON A. LEHMAN, OF FORT WAYNE, INDIANA.

## LUBRICATING-OIL FEEDER.

No. 889,248.

Specification of Letters Patent.

Patented June 2, 1908.

Application filed July 23, 1906. Serial No. 327,279.

*To all whom it may concern:*

Be it known that I, SOLOMON A. LEHMAN, citizen of the United States of America, and resident of Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Lubricating-Oil Feeders, of which the following is a specification.

This invention relates to improvements in lubricating oil feeders, and the object thereof is to provide a device of the class described for automatically forcing lubricating oil into the feed pipe of a steam engine to thereby effect the lubrication of its cylinder. This object is attained by the construction illustrated in the accompanying drawings in which

Figure 1 is an elevation, partly in vertical section, and showing the internal mechanism of the device; Fig. 2 is an exterior view in a plane at right angles to that of Fig. 1, and showing the adjustable actuating mechanism; and Fig. 3 is a detail showing a side view of the eccentrics and their respective eccentric straps.

Similar numerals of reference indicate corresponding parts throughout the several views and referring now to the same:

1 is a reservoir, into the lower part of which extends a block 2, and into the upper part of which extends a horizontal driving shaft 3, the latter being rotatively supported in bearings 4. The block 2 has upon one side thereof an extending flange 5 which rests against and is secured to the adjacent external face of the reservoir. The block 2 has a vertical bore 6 near the lower part of which are two ports, 7 and 8 respectively, the former communicating with the bore of the block and the interior of the reservoir, and the latter communicating with said bore and a discharge pipe 9 which is secured in the block. A hollow plunger 10 extends into the bore of the block and is adapted to be reciprocated therein, and a valve rod 11 extends through the plunger and has fixed upon its lower end a cylindrical valve 12. A stuffing box 13 is provided at the top of the plunger for the valve rod, and another stuffing box 14 is provided at the top of the block for the plunger. The valve 12 has a vertical passage way 15 made in its side, and said valve is adapted to alternately close the ports 7 and 8.

Two eccentrics, 16 and 17 respectively, are fixed upon the driving shaft 3 within the reservoir, the former eccentric having a strap 18

which has connection, by means of an arm 19, with the plunger 10, and said plunger is adapted to be actuated thereby. The eccentric 17 has a strap 20 which has connection, by means of an arm 21, with the valve rod 11, and the latter is adapted to be actuated thereby.

The driving shaft 3 has fixed thereon a ratchet-wheel 22 external of the reservoir, and adjacent to the ratchet-wheel is a swinging arm 23 which is loosely mounted upon the shaft. At the lower end of the arm 23 are pivoted two pawls 24 and 25, one of which is slightly longer than the other, and which are adapted to engage the ratchet-wheel and thereby actuate the same when the arm 23 is swung to and fro. These pawls are held into contact with the toothed face of the ratchet-wheel by means of springs 26 which are also secured at the lower end of the arm 23. Detent pawls 27 and 28 are pivoted in connection with the reservoir and act against the toothed face of the ratchet-wheel and prevent the latter from retracting. Springs 29 serve to hold the respective detent pawls in contact with the ratchet-wheel.

A stud 30 projects outwardly from the arm 23, and an operating lever 31 is loosely mounted upon said stud. The upper end of said lever is bifurcated, and straddles the boss 31' of the arm 23. In one side 32 of the bifurcated end of the lever is an adjusting screw 33 by means of which the lever may be made to have more or less play relative to the arm 23. By swinging the lever 31, the arm 23 will thereby be actuated and the shaft 3 rotated accordingly.

In the lower part of the reservoir is a pipe 34, the ends of which project through the opposite walls thereof. The object of this pipe is to provide means for heating the contents of the reservoir, and this is done by connecting said pipe with a suitable source of steam supply.

An opening 35 is made in one side of the reservoir, and a plate 36 serves to normally close said opening, but may be removed to gain access, through said opening, to the internal mechanism. The reservoir has also at its top a cover 37 which may be removed for the purpose of filling the reservoir.

In the operation of this invention, the reservoir is charged with a supply of lubricating oil, and the lever 31 is connected with any suitable source of power adapted to transmit thereto continuous, oscillating movement,



whereby the plunger and valve are made to reciprocate in the block. While the valve is in its lowermost position the port 8 thereby closed and the port 7 open, the plunger, 5 moving upward, draws a charge of oil from the reservoir, through the port 7 into the bore of the block. When the valve is in uppermost position, the port 7 is thereby closed and the port 8 is open so that when the plunger 10 descends, the oil previously drawn into the bore is forced downward through the passageway 15 and out through the port 8 into the discharge pipe through a check valve 38 which prevents the oil from returning. 15 ing.

Having described my invention what I claim as new and desire to secure by Letters Patent is:—

1. In an oil feeding device, a reservoir; a 20 block extending into the lower part of the reservoir and having a vertical bore, and inlet and discharge ports in connection therewith; a hollow plunger extending into the bore of the block and adapted to reciprocate 25 therein; a valve in the bore of the block

adapted to alternately close said ports, a valve rod which extends up through said plunger; a driving shaft means in connection therewith to actuate the same, and independent connections respectively with said plunger and valve rod to actuate them. 30

2. In a device of the class described, a reservoir, a block contained within its lower part, the latter having a vertical bore and inlet and discharge ports in connection therewith; a valve in the block adapted to alternately close said ports; a hollow plunger extending into the bore of the block and adapted to reciprocate therein; a valve rod extending through the plunger and having 40 connection with the valve; and suitable actuating mechanism having separate connections with the valve rod and plunger adapted to actuate the same independently.

In testimony whereof I affix my signature, 45 in presence of two witnesses.

SOLOMON A. LEHMAN.

Witnesses:

MATILDA METTLER,  
W. G. BURNS.