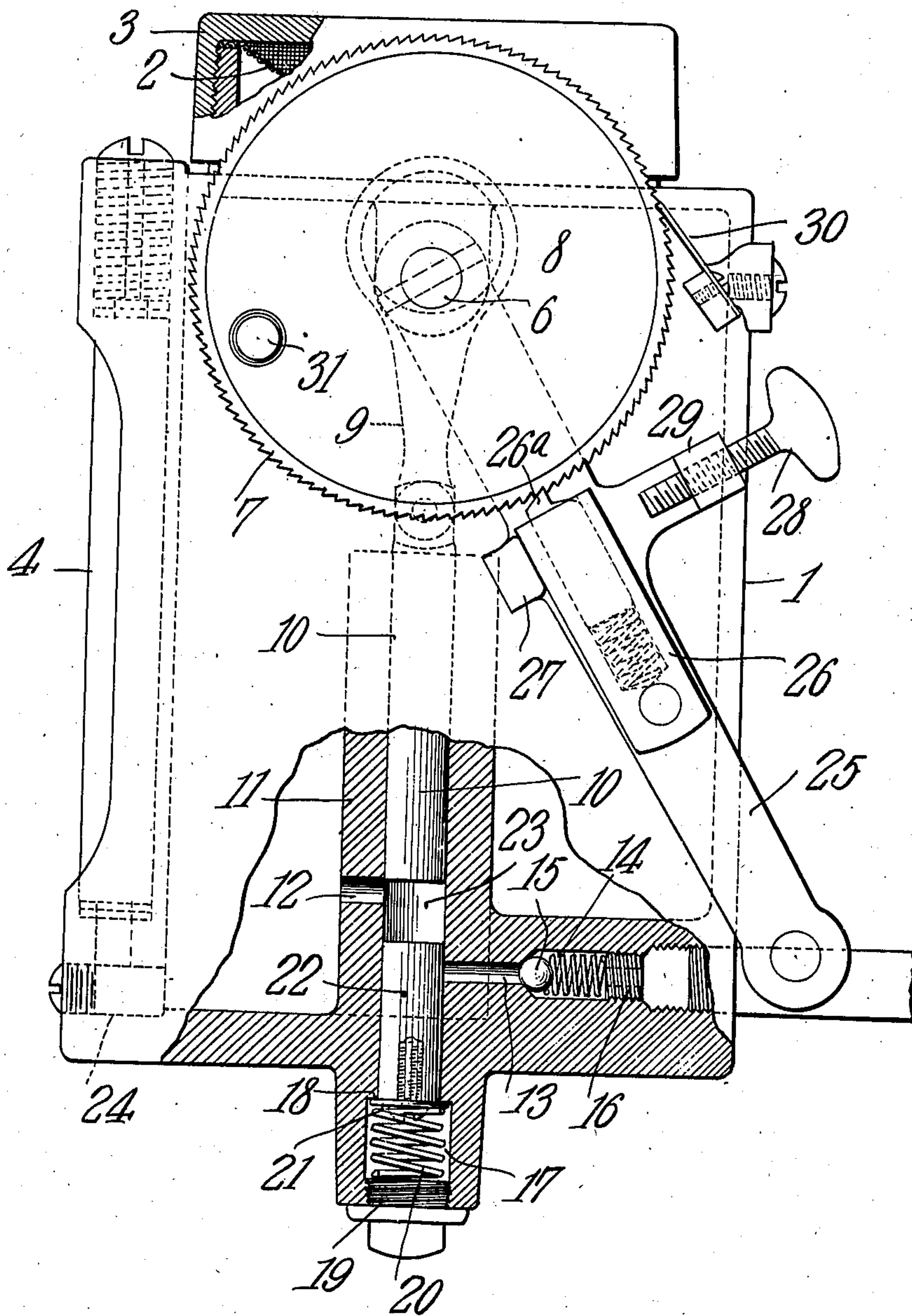


No. 880,638.

PATENTED MAR. 3, 1908.

J. A. DICKEY.
LUBRICATOR FOR STEAM ENGINES.
APPLICATION FILED JUNE 27, 1907.



Johnathan A. Dickey,

INVENTOR.

WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHNATHAN A. DICKEY, OF COLUMBUS, INDIANA, ASSIGNOR OF ONE-FOURTH TO WILLIAM W. DENISON AND ONE-FOURTH TO WALLACE B. DENISON, OF COLUMBUS, INDIANA.

LUBRICATOR FOR STEAM-ENGINES.

No. 880,638.

Specification of Letters Patent.

Patented March 3, 1908.

Application filed June 27, 1907. Serial No. 381,131.

To all whom it may concern:

Be it known that I, JOHNATHAN A. DICKEY, a citizen of the United States, residing at Columbus, in the county of Bartholomew and State of Indiana, have invented a new and useful Lubricator for Steam-Engines, of which the following is a specification.

This invention relates to lubricators for steam and hydrocarbon engines and the like and is more particularly designed for use where the lubricant is to be forced against pressure within the engine.

The object of the invention is to provide simple and efficient means whereby a lubricant can be withdrawn in predetermined quantities and at predetermined periods from a receptacle and subsequently forced to the point of use.

Another object is to provide simple and efficient mechanism whereby the operation of the parts may be effected.

With these and other objects in view the invention consists of certain novel features of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claims.

In the accompanying drawing, which is a view partly in section and partly in elevation, the preferred form of the invention has been shown.

Referring to the drawing by characters of reference, 1 designates an oil receptacle which may be of any suitable size and proportion and preferably provided with a strainer 2 and a screw cap 3 at the top thereof, while a sight glass 4 of suitable construction is arranged along one side of the receptacle. A shaft 6 extends from one wall of the receptacle 1 and revolubly mounted thereon is a ratchet wheel 7 and an eccentric 8 rotating therewith. This eccentric is disposed to actuate a pitman 9 connected to a plunger 10 mounted to reciprocate within a tubular casing 11 located within the receptacle and provided with an oil inlet port 12. An outlet port 13 extends from the casing 11 at a point below the port 12 and this outlet port is normally closed by means of a check valve 14 which, as shown in the drawing, may consist of a spring pressed ball 15. A tubular screw plug 16 may be utilized for holding the valve in place, and said plug also constitutes means for connecting a discharge pipe to the lubricator. The bottom portion of the bore of casing 11 is enlarged as at 17 to

form an interior annular shoulder 18 and the screw plug 19 is detachably mounted within the lower end of said bore and serves to support a cushioning spring 20. This spring bears against a washer 21 which is secured to the lower end of a plunger 22 and is held normally in contact with the shoulder 18 by the spring 20. Plunger 22 normally extends a short distance above the port 13 so that when the plunger 10 is raised an oil receiving compartment 23 is formed therebetween and the port 12 opens into it. A suitable drain 24 is preferably located upon the bottom of the receptacle 1 so that the same can be cleaned out whenever desired.

An arm 25 is fulcrumed upon the shaft 6 and pivoted thereon is a casing 26 in which is located a spring pressed pawl 26^a normally engaging the ratchet wheel 7. The pivotal movement of the casing 26 is limited by means of a stop 27 and a screw 28 which is mounted in a support 29 provided therefor. Both the stop and support 29 are arranged in the arm. A spring 30 is mounted close to and is disposed to engage the ratchet wheel so as to prevent it from rotating in one direction.

It is to be understood that the arm 25 is to be connected to a movable part of an engine so that said arm will be oscillated during the operation of the engine. When the plungers are in the position shown in the drawing oil will be free to flow through port 12 and into compartment 23. As the arm 25 oscillates backward and forward it slowly revolves the ratchet wheel 7 and eccentric 8 and gradually moves the plunger 10 downward. Said plunger forces the oil which is within the compartment 23 against the spring supported plunger 22 and immediately subsequent to the closing of port 12 by plunger 10 the pressure on the plunger 22 causes the same to move downward and open the port 13. The oil will therefore be forced outward through said opening by the pressure exerted by spring 20 and will be directed past the ball 15 and to the point of use. As the ratchet wheel 7 continues to rotate the plunger 10 will be slowly raised and as soon as it passes the port 12 the oil will flow into the compartment 23 and fill the vacuum produced therein.

It will be obvious that by adjusting screw 28 the backward movement of the casing 26 and pawl 26^a can be increased or diminished

so as to slip over one or more teeth and correspondingly increase or diminish the feed of oil. If desired the mechanism can be quickly actuated manually. To do this a 5 grip or crank 31 is placed upon the ratchet 7 so that the operator can readily rotate said ratchet. It will be seen that the apparatus is very simple, durable, and efficient, and will 10 effectually operate to supply lubricant to an engine at desired intervals during the operation thereof.

What is claimed is:

1. The combination with a receptacle and means for successively trapping a lubricant 15 and forcing it from the receptacle; of mechanism for actuating said means and including an oscillatory arm, a pivot device upon the arm, a ratchet engaging member movably mounted upon said device, and adjustable 20 means on the arm for limiting the movement of said device in relation to the arm.

2. The combination with a lubricant receptacle, and a casing projecting thereinto having an inlet communicating with said re- 25 ceptacle, and a valved outlet; of a cushioned plunger within said casing and normally

closing the outlet, a plunger mounted to reciprocate within the casing and to successively open and close the inlet, a ratchet wheel, means operated thereby for reciprocating the plunger, an oscillatory arm, a pawl carried thereby and engaging the ratchet wheel, and adjustable detachable means for limiting the movement of the pawl. 30

3. The combination with a receptacle, and means for successively trapping a lubricant and forcing it from the receptacle; of mechanism for actuating said means, said mechanism including the ratchet, an oscillatory 40 arm, a casing pivotally mounted upon the arm, a spring pressed pawl within the casing and engaging the ratchet, and adjustable means upon the arm for limiting the movement of the casing in relation to the arm. 45

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHNATHAN A. DICKEY.

Witnesses:

GEORGE KENNEY,
LEWIS MOORE.