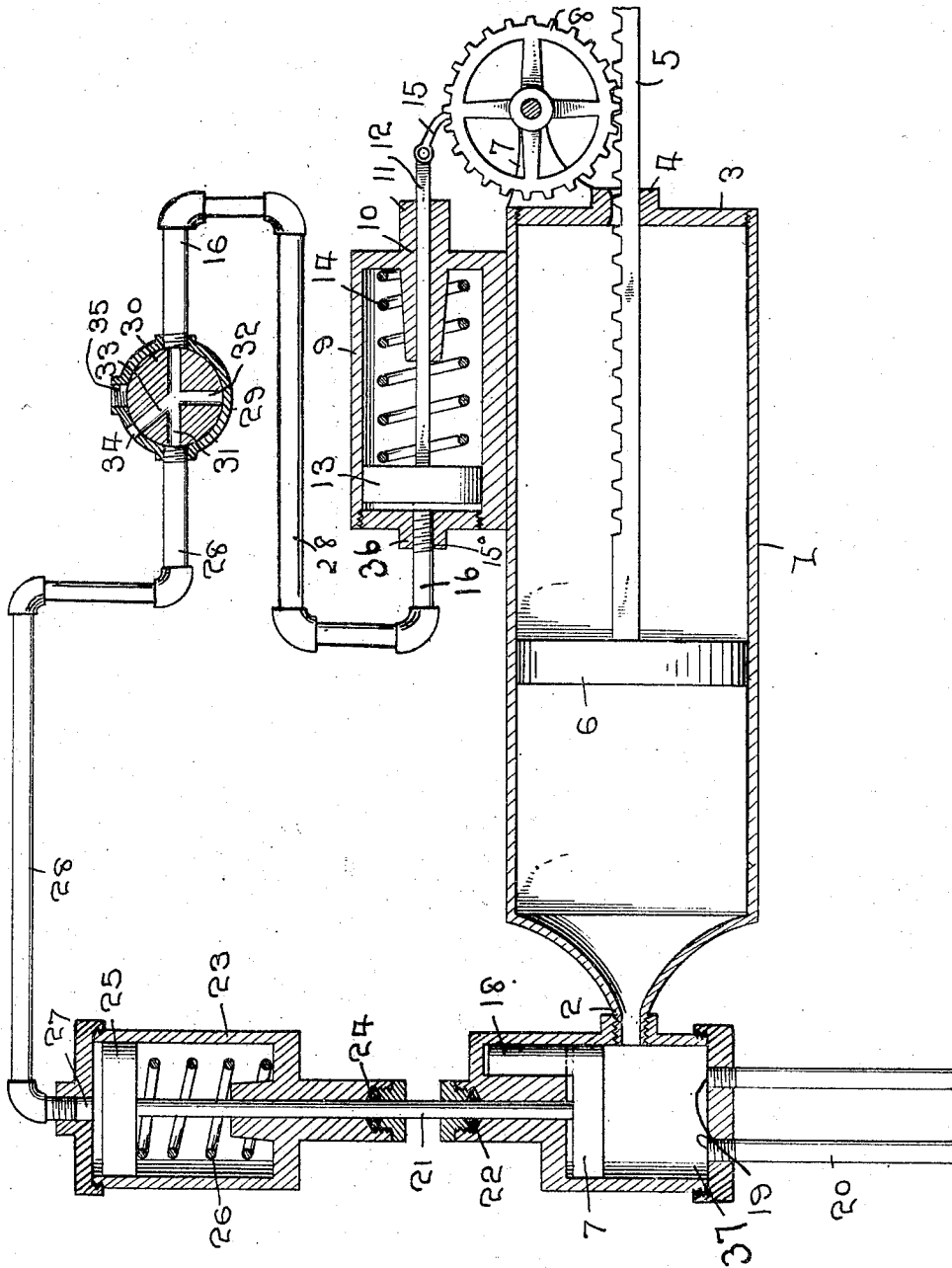


J. W. F. BERRY & J. MACON.  
OILING DEVICE.  
APPLICATION FILED NOV. 23, 1911.

1,039,083.

Patented Sept. 24, 1912.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JACOB W. F. BERRY AND JOHN MACON, OF ST. LOUIS, MISSOURI.

## OILING DEVICE.

1,039,083.

Specification of Letters Patent.

Patented Sept. 24, 1912.

Application filed November 23, 1911. Serial No. 661,885.

*To all whom it may concern:*

Be it known that we, JACOB W. F. BERRY and JOHN MACON, citizens of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Oiling Devices; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to new and useful improvements in oiling devices and more particularly to an oiling device, by means of which a quantity of oil may be forced, when desired, to the bearings of an engine.

The object of our invention is to provide a receptacle for containing a supply of oil and means associated therewith for forcing a quantity of said oil to the bearings of an engine.

Other objects and advantages of our invention will be hereinafter made clearly apparent in the specification and pointed out in the claims.

In the accompanying drawing we have shown the preferred form which our invention may take.

The drawing shows a longitudinal sectional view through our complete device.

Referring to the drawings, in which similar reference numerals designate corresponding parts throughout the several views, 1 is a receptacle, which is preferably circular in cross section, and which is open at one end and provided with a reduced opening 2 at its opposite end. The open end of said receptacle is adapted to be normally closed by means of a cover 3. The cover 3 is provided with a preferably centrally disposed aperture 4, through which a rack 5 is adapted to extend. The inner end of the rack 5 is secured to a plunger 6, which is adapted, as hereinafter described, to force the lubricant contained by the receptacle 1 through the aperture 2. The cover 3 is also provided with a rearwardly extending bracket 7, to the rear end of which is pivotally secured a gear wheel 8, adapted to mesh with said rack 5.

In order that the gear 8 may be rotated when desired so that the rack 5 may be moved inwardly, we secure a cylinder 9 to the upper portion of the receptacle 1. One end wall of the cylinder 9 is provided with

a centrally disposed aperture 10, around which is formed a sleeve 11. The sleeve 11 forms a bearing for a rod 12, which is secured at its inner end to a piston head 13. The piston head 13 closely fits within the cylinder 9 and is adapted to be normally held in the position shown in the drawing, by means of a coiled spring 14 disposed between one end wall of the cylinder and one face of the piston. The outer end of the rod 12 is provided with a pawl 15 adapted to engage the teeth of the gear wheel 8. The opposite end of the cylinder 9 is provided with an opening 15, in which is adapted to be secured a pipe 16 for the admission of a suitable fluid such as air or steam.

The reduced outlet opening 2 is secured to and in engagement with an oil cylinder 37, in which is slidably mounted a piston head 17. The piston 17 is normally in the position shown in the drawing. Said piston head is provided with an upwardly extending portion 18, which is adapted to act as a cut off for the opening 2 when the piston 17 is forced out of the position shown in the drawings, as hereinafter more clearly described. The opposite end of the cylinder 37 is provided with a plurality of openings 19 in which are secured oil supply pipes 20 adapted to conduct oil to the bearings of an engine. The piston head 17 is rigidly connected to a piston rod 21, which extends through the upper end of the cylinder, it being understood that a suitable packing gland 22 is provided for said rod 21. The rod 21 also extends through the lower end of a cylinder 23, a suitable packing gland 24 being provided. The upper end of the rod is rigidly connected to a piston 25, which is normally held in the position shown by means of a coiled spring 26 interposed between said piston and the lower end of the cylinder 23. The upper end of said cylinder 23 is provided with an opening 27, in which is secured a pipe 28 for the admission of a suitable operating fluid such as air or steam. The pipes 16 and 28 are extended and connected to a suitable operating valve 29, by means of which the operating fluid such as air may be admitted to the cylinders 9 and 23, when desired.

The valve 29 consists of a casing and a rotatable member 30 having communicating ways 31, 32 and 33 therein. As shown in

the drawings the rotatable member is in its normal position, the way 31 connecting the pipes 16 and 28 and the way 33 communicating with an exhaust port 34. The valve casing 29 is provided with an inlet opening 35 adapted to receive the end of a pipe extending from a suitable operating fluid supply tank.

When it is desired to force a quantity of oil to the bearings of the engine with which our device is associated, the valve is operated so as to bring the ways 31 and 32 into communication with the inlet opening 35 and the pipe 16, respectively. The operating fluid, which it will be understood is under pressure, will be admitted by pipe 16 to the end of cylinder 9 and consequently the piston 13 will be forced toward the opposite end of said cylinder against the action of the coiled spring 14. This movement of the piston 13 will result in causing the pawl 15 to rotate the gear wheel 8. The movement of the gear 8 will force the rack 5 inwardly so that the piston 6 will place the quantity of grease contained in the receptacle 1 under pressure and force a quantity thereof through the outlet opening 2 and into the cylinder 37.

The cylinder 37 is of such a size as to hold a quantity of oil sufficient to properly lubricate the bearings of the engine to which the same is connected. When the cylinder 37 has been filled, as just described, the valve 29 is returned to initial position, allowing the cylinder 9, to exhaust and then is operated so that the ways 31 and 32 are brought into communication with the inlet opening 35 and the pipe 28, respectively, so that the operating fluid will be admitted to the upper end of the cylinder 23. The operating fluid will force the piston 25 to the opposite end of the cylinder against the action of the coiled spring 26. At the same time the piston 17 will be moved downwardly to the lower end of the cylinder 37 and will force the quantity of grease or lubricant contained therein through the pipes 20 to the bearings of the engine to which said pipes are connected.

It will be understood that when the piston 17 is moved downwardly, the grease under pressure in the receptacle 1 will be prevented from filling the upper portion of the cylinder 37 by the cut off 18.

When the operating fluid is cut off from the cylinders 9 and 23, it will be understood that the coiled springs 14 and 26, respectively, will return their pistons 13 and 25, respectively, to initial position so that when it is desired to force an additional quantity of oil to the bearings of the engine the above described operation is repeated.

The receptacle 1 is adapted to contain a large quantity of heavy grease or other lubricant, which is adapted to be placed under

pressure and forced therefrom. It is unnecessary and impractical to place the contents of the receptacle under sufficient pressure to force the same directly to the bearings, so that in addition to the receptacle 1 and its controlling means, we find it desirable to employ a smaller receptacle or cylinder adapted to contain a quantity of grease or lubricant sufficient for one oiling, and also employ means for forcing the grease therefrom to the bearings of an engine.

From the foregoing description it will be seen that we have provided a device adapted to contain a quantity of grease or other desired lubricant and adapted, when desired, to force a quantity thereof to the bearings of the engine.

While we have described the preferred form of our invention, we desire it to be understood that certain modifications may be made therein without departing from the spirit and scope of our invention.

What we claim as new is:

1. An oiling device comprising an oil containing receptacle having a discharge opening, a piston in said receptacle and means to operate said piston to force the oil through said discharge opening, a cylinder connected to said discharge opening, distributing pipes connected to one end of said cylinder, a piston normally positioned in the opposite end of said cylinder, and means to move said piston to the other end of said cylinder, means carried by said piston to close the discharge opening from said receptacle when said piston is out of normal position.

2. An oiling device comprising an oil containing receptacle having a discharge opening, a piston in said receptacle and means to operate said piston to force the oil through said discharge opening, a cylinder connected to said discharge opening, distributing pipes connected to one end of said cylinder, a piston normally positioned in the opposite end of said cylinder, an operating cylinder adjacent the first mentioned cylinder, a piston therein, means to normally hold said piston at one end of said cylinder, a fluid operating supply pipe communicating with said end of said cylinder, means to control the admission of operating fluid to said pipe, and means connecting said pistons to cause the same to move simultaneously.

3. An oil device comprising the combination with an oil containing receptacle having a discharge opening, a piston in said receptacle and means to operate said piston; of a cylinder in connection with the discharge opening of said receptacle, a piston therein normally positioned at one end thereof, distributing pipes connected with the opposite end of said cylinder, a cut-off integral with last said mentioned piston

adapted to close the discharge opening  
when said piston is moved out of normal  
position, an operating cylinder adjacent said  
first mentioned cylinder, a piston therein,  
5 a fluid operating supply pipe communicat-  
ing with one end of said cylinder, a spring  
interposed between said piston and the  
other end of said operating cylinder, means  
connecting said piston with the piston in  
10 said first mentioned cylinder, and means to

control the admission of operating fluid to  
said supply pipe.

In testimony whereof we have signed our  
names to this specification in the presence  
of two subscribing witnesses.

JACOB W. F. BERRY.  
JOHN MACON.

Witnesses:

JOHN H. WILLIAMS,  
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,  
Washington, D. C."