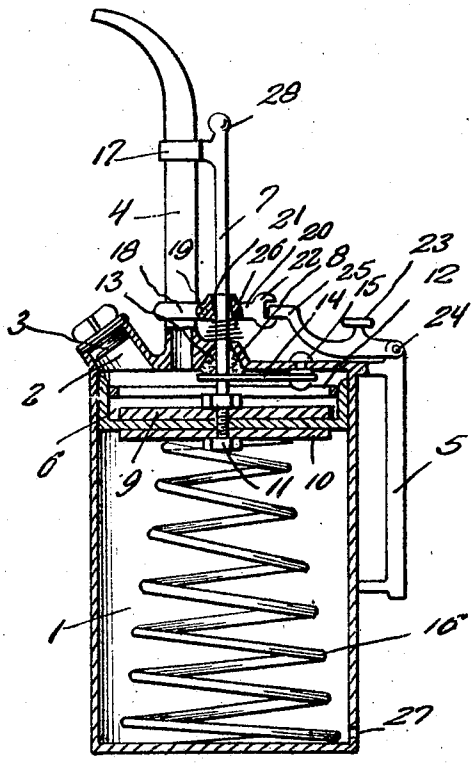
March 23, 1926. 1,577,929

G. W. OAKES

FORCE FEED OIL CAN

Filed Jan. 17, 1925



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UNITED STATES PATENT OFFICE.

GRANT W. OAKES, OF OTTAWA, KANSAS.

FORCE-FEED OIL CAN.

Application filed January 17, 1925. Serial No. 3,153.

To all whom it may concern:

Be it known that I, GRANT W. OAKES, a citizen of the United States, residing at Ottawa, in the county of Franklin and State of Kansas, have invented certain new and useful Improvements in a Force-Feed Oil Can, of which the following is a specification.

This invention relates to oil cans and more particularly to those of the force feed type.

One of the important objects of the present invention is to provide a force feed oil can wherein a spring controlled piston is arranged within the oil receptacle for automatically discharging the oil from the receptacle through the discharge spout, means being provided for limiting the upward movement of the piston whereby the flow of the oil through the spout may be stopped.

A further object is to provide a force feed oil can of the above mentioned character, which is simple in construction, inexpensive, strong and durable and further well adapted for the purposes for which it is designated.

Other objects and advantages of this invention will become apparent during the course of the following description.

In the accompanying drawing, forming a part of this specification and in which like numerals designate like parts throughout the same:

The figure represents a view partly in section and partly in elevation of the oil can embodying my invention.

In the drawing, wherein for the purpose of illustration is shown the preferred embodiment of my invention, the numeral 1 designates the receptacle forming a part of the present invention, the same being provided in its top with the filling opening 2, a suitable closure 3 being associated therewith. Extending upwardly from the top of the receptacle 1 is the discharge spout 4. A suitable handle 5 is provided at the side of the receptacle.

Adapted for reciprocatory movement within the receptacle 1 is the piston 6, the same comprising a cup shaped member formed preferably of leather. A piston rod or the like shown at 7 has its lower end extending centrally through the piston 6 and secured thereto. The piston rod extends upwardly through a substantially conical shaped opening 8 provided in the top of the receptacle adjacent the spout 4. Suitable washers 9 and 10 are disposed on the opposite faces of the piston 6, the same being held on the lower portion of the piston rod 7 through the medium of suitable locking nuts 11. The outer portion of the cup shaped piston 6 is held in contact with the inner wall of the receptacle 1 through the medium of the spring element 12.

Suitable packing such as is shown at 13 is arranged within the conical shaped opening 8 around the piston rod 7 and is held in position through the medium of a flat spring 14, the latter being disposed on the underside of the top of the receptacle and being secured thereto as at 15.

A helical coil spring 16 is arranged within the receptacle 1, the upper end thereof engaging the bottom of the piston while the lower end is in engagement with the bottom of the receptacle. The purpose of the helical coil spring is to provide a means for facilitating the upward movement of the piston whereby the oil in the receptacle may be discharged therefrom through the spout 4 when the oil can is in use. A guide such as is illustrated at 17 is associated with the piston rod 7 adjacent the upper end thereof, the guide being adapted for slidable movement on the discharge spout 4. This guide is in the form of a sleeve and encircles the discharge spout.

A clamping ring 18 is secured on the lower portion of the discharge spout 4 and pivotally secured at its inner end on the ring 18 as at 19 is the locking member or catch 20. The intermediate portion of the catch or lock 20 is provided with a vertically extending offset opening 21 which cooperates with the slidable piston rod 7 in the manner to be hereinafter more fully described. The outer end of the lock or catch 20 is provided with a notched head 22. Cooperating therewith is the lever 23, the latter being pivotally supported at its outer end on the upper end of the handle 5 as illustrated at 24. The lever 23 has its inner portion curved upwardly and terminates in the laterally extending finger 25 which cooperates with the notch in the head 22 of the lock or catch 20 as clearly illustrated in the drawing.

An expansible coil spring 26 encircles the piston rod 7 and is disposed between the upper end of the conical opening 13 and the bottom of the intermediate portion of the lock or catch 20. The purpose of the expansible coil spring 26 is to provide a means for normally holding the lock or catch 20

in the position as shown in the drawing whereby the offset opening 21 is not in vertical alignment with the piston rod 7 thus frictionally engaging the same at two points and preventing the vertical movement of the piston rod whereby the piston is locked against further upward movement within the receptacle whereby the flow of oil to the discharge spout is cut off. An air vent such as is illustrated at 27 is arranged in the lower portion of the receptacle.

In use, presuming that the receptacle is filled with oil so that the piston 6 is disposed in the lowermost portion of the receptacle and the helical coil spring 16 is compressed, by pressing downwardly on the pivoted lever 23, a similar movement is imparted to the lock or catch 20 whereupon the offset opening 21 is disposed in vertical alignment with the piston rod 7. The helical coil spring 16 will then force the piston 6 upwardly within the receptacle simultaneously causing an upward movement of the piston rod 7 whereby a quantity of oil will be discharged from the receptacle out through the discharge spout 4. To cut off the flow of oil from the receptacle through the spout 4, the lever 23 is released and the coil spring 26 will automatically return the lock or catch 20 to its normal position whereby the same will engage the piston rod 7 and prevent the further upward movement thereof. The arresting of the upward movement of the piston rod will also limit the upward movement of the piston within the receptacle.

The oil can may be refilled by removing the closure 3 from the filling opening 2 and moving the piston 6 downwardly against the tension of the helical coil spring 16 by exerting a downward pressure on the knob 28 provided on the upper end of the piston rod 7.

It will thus be seen from the foregoing description that a force feed oil can has been provided which will at all times be positive and efficient in its operation and the flow of oil may be easily controlled.

While I have shown the preferred embodiment of my invention, it is to be understood that various changes in the size, shape and arrangement of parts may be resorted to without departing from the spirit of the invention and the scope of the appended claims.

Having thus described the invention, what I claim is:—

1. A force feed oil can comprising a receptacle having a filling opening in the top thereof, a discharge spout extending upwardly from the top of the receptacle, a piston operable in said receptacle, a piston rod secured at its lower end to said piston and extending upwardly through the top of the receptacle, a coil spring in the receptacle and adapted to force the piston upwardly to discharge the oil from the receptacle outwardly through the spout, means for locking the piston rod against vertical movement, said locking means comprising a catch having one end pivotally supported on the lower portion of the spout, the intermediate portion of said catch being provided with a vertically disposed offset opening for receiving the piston rod, and a coil spring for holding the catch in locking engagement with the piston rod.

2. A force feed oil can comprising a receptacle having a filling opening in the top thereof, a discharge spout extending upwardly from the top of the receptacle, a piston operable in said receptacle, a piston rod secured at its lower end to said piston and extending upwardly through the top of the receptacle, a coil spring in the receptacle and adapted to force the piston upwardly to discharge the oil from the receptacle outwardly through the spout, means for locking the piston rod against vertical movement, said locking means comprising a catch having one end pivotally supported on the lower portion of the spout, the intermediate portion of said catch being provided with a vertically disposed offset opening for receiving the piston rod, a coil spring for holding the catch in locking engagement with the piston rod, and means for releasing said catch whereby the offset opening is brought into vertical alignment with the piston rod.

3. A force feed oil can comprising a receptacle having a filling opening in the top thereof, a discharge spout extending upwardly from the top of the receptacle, a piston operable in said receptacle, a piston rod secured at its lower end to said piston and extending upwardly through the top of the receptacle, a coil spring in the receptacle and adapted to force the piston upwardly to discharge the oil from the receptacle outwardly through the spout, means for locking the piston rod against vertical movement, said locking means comprising a catch having one end pivotally supported on the lower portion of the spout, the intermediate portion of said catch being provided with a vertically disposed offset opening for receiving the piston rod, a coil spring for holding the catch in locking engagement with the piston rod, and means for releasing said catch whereby the offset opening is brought into vertical alignment with the piston rod, said releasing means comprising a pivoted lever having its free end engaging the free end of the catch whereby the catch is depressed when the lever is actuated.

In testimony whereof I affix my signature.

GRANT W. OAKES.