July 17, 1923. 1,462,174

L. M. HALE

LUBRICATING DEVICE

Filed Oct. 31, 1921

Fig. 1.

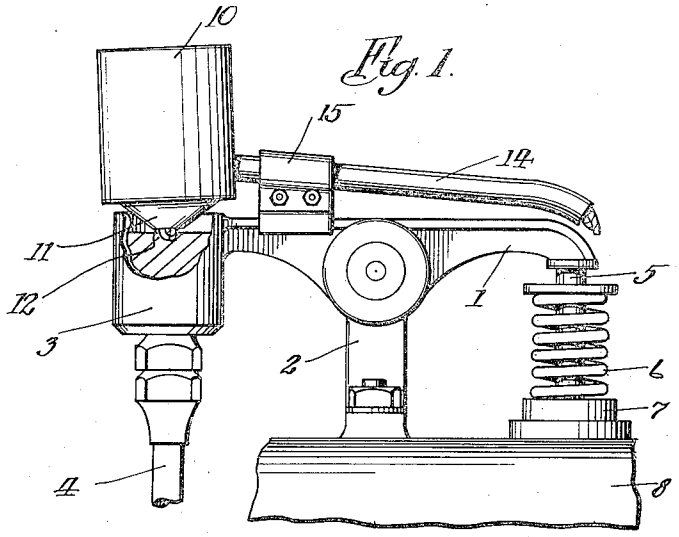


Fig. 2.

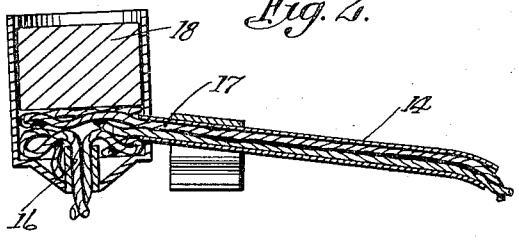
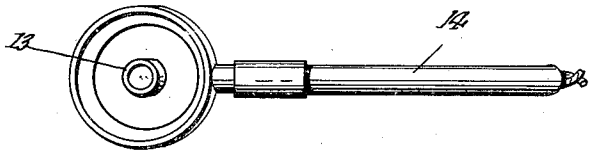


Fig. 3.



Witnesses
Berthold Oblatt
N. G. Stedman

Inventor
Lee M. Hale
By Joshua R. H. Potts
His Attorney

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UNITED STATES PATENT OFFICE.

LEE M. HALE, OF CHICAGO, ILLINOIS.

LUBRICATING DEVICE.

Application filed October 31, 1921. Serial No. 511,566.

To all whom it may concern:

Be it known that I, LEE M. HALE, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Lubricating Devices, of which the following is a specification.

My invention relates to lubricating devices, and has for its object the provision of a construction of this character which is particularly adapted for application to so-called "overhead valves" of internal combustion engines, and which will supply lubricant to the moving parts of such valves which are ordinarily unlubricated.

Another object of the invention is to provide an oil reservoir having means for maintaining the flow of lubricant therefrom for a predetermined period before exhaustion of said reservoir.

Other objects will appear hereinafter.

The invention consists in the combination and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Fig. 1 is a side elevation of the invention in operative position.

Fig. 2 is a sectional side view of the invention, and

Fig. 3 is a top plan view of the invention showing the interior of the reservoir.

The so-called overhead valves of internal combustion engines are ordinarily insufficiently lubricated, and my invention is designed to supplement the lubricating means ordinarily employed, and to provide additional means for lubricating parts of said valves.

In the drawings 1 represents an overhead valve rocker arm of any suitable construction, pivoted on a supporting stud 2, having provided at one end a combination grease cup and bearing 3, which is adapted to accommodate and lubricate one end of the valve stem 4. The other end of the arm 1 engages the upper end of the valve stem 5, on which is mounted the usual spring 6 which abuts against a seat 7 provided in the cylinder block 8. The parts above described are all well known and of themselves form no part of the present invention.

My invention consists of a lubricating attachment adapted to be applied to the rocker arm 1. The device has a cup or reservoir 10 having a conical end 11, which is provided with an aperture 12, said aperture having an interior annular rib 13 surrounding same.

Mounted on the cup 10 is a spout 14, which communicates at its inner end with the cup 10, the outer end thereof being preferably downwardly curved and disposed over the end of the rocker arm 1 and the valve stem 5, as shown in Fig. 1. The attachment is preferably secured to the rocker arm by a suitable bracket 15 which may be held in position on said arm by bolts extending therethrough.

Disposed in the bottom of the cup are wicks 16 and 17, the end of the wick 16 projecting out of the aperture 12 a suitable distance, and the wick 17 extending through the spout and projecting from the end thereof a suitable distance, as shown in Fig. 2. A pad, or pads, 18 of felt or other absorbent material are preferably placed in the cup, as shown, to prevent spilling or too rapid feeding of the oil through the wicks. The construction is such that when in position on the rocker arm of the valve, and the reservoir 10 is filled with lubricant, the flow of such lubricant through the aperture 12 and the spout 14 will continue a certain period before the reservoir 10 is exhausted. For instance, the reservoir may be supplied with such quantity of lubricant in the morning that by night all of the lubricant will have passed from the reservoir, thereby cutting off the supply of oil when the machine is standing over night. If desired, suitable means may be employed for permitting or cutting off the flow of lubricant from the device at will in order to obviate the necessity for daily filling.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of the construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

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

1. In combination with a valve having a rocker arm; a lubricating device mounted on

said arm and having a reservoir; and means communicating with said reservoir disposed adjacent one end of said rocker arm, and means communicating with said reservoir disposed adjacent the other end of said rocker arm.

2. In combination with a valve having a rocker arm; a lubricating device mounted on said rocker arm and having a reservoir, there being means communicating with said reservoir disposed adjacent one end of said rocker arm; and an extension communicating with said reservoir and disposed adjacent the opposite end of said rocker arm.

3. In combination with a valve having a rocker arm; a lubricating device mounted on said arm and having a reservoir, there being on opening in said reservoir disposed adjacent one end of said arm; and an extension communicating with said reservoir disposed adjacent the opposite end of said rocker arm.

4. In combination with a valve having a rocker arm; a lubricating device mounted on said arm and having a reservoir, there being an opening in said reservoir disposed adjacent one end of said arm; an extension communicating with said reservoir disposed adjacent the opposite end of said rocker arm; and absorbent means in said reservoir, said aperture and said extension for gradually feeding the lubricant therethrough.

5. In combination with a valve having a rocker arm; a lubricating device mounted on said arm and having a reservoir, there being an opening in said reservoir disposed adjacent one end of said arm; an extension communicating with said reservoir and disposed adjacent the opposite end of said rocker arm; absorbent means in said reservoir; and a wick in said aperture and said extension.

6. A lubricating device having an open reservoir, there being an aperture therein; a spout communicating with said reservoir; a wick in said reservoir having one end disposed in said aperture and the other end disposed in said spout and its intermediate portion coiled in said reservoir; and absorbent means substantially filling said reservoir.

7. A lubricating device having a reservoir, there being an opening therein; a spout communicating with said reservoir; a wick in said reservoir having one end disposed in said opening and the other end disposed in said spout, and having its intermediate portion coiled in said reservoir.

8. In combination with a valve having a rocker arm; a lubricating device mounted on said rocker arm and having a reservoir disposed at one end thereof, there being an aperture in said reservoir; a spout mounted on and communicating with said reservoir and having its outer end disposed above the other end of said rocker arm; and absorbent means disposed in said aperture and said spout for regulating the flow of lubricant therethrough.

9. In combination with a valve having a rocker arm; a lubricating device mounted on said rocker arm and having a reservoir disposed at one end thereof there being an aperture in said reservoir; an annular interior rib surrounding said aperture; a spout mounted on and communicating with said reservoir and having its outer end disposed above the other end of said rocker arm; wicks disposed in said aperture and said spout for regulating the flow of lubricant therethrough; and absorbent material disposed in said reservoir to retain lubricant therein.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

LEE M. HALE.

Witnesses:
FREDA C. APPLETON,
JOSHUA R. H. POTTS.