April 22, 1924. 1,491,710

C. F. LAYMAN

AUTOMATIC VALVE STEM GUIDE AND ROCKER ARM WICK LUBRICATOR

Filed March 12, 1923 2 Sheets-Sheet 1

Fig. 3.

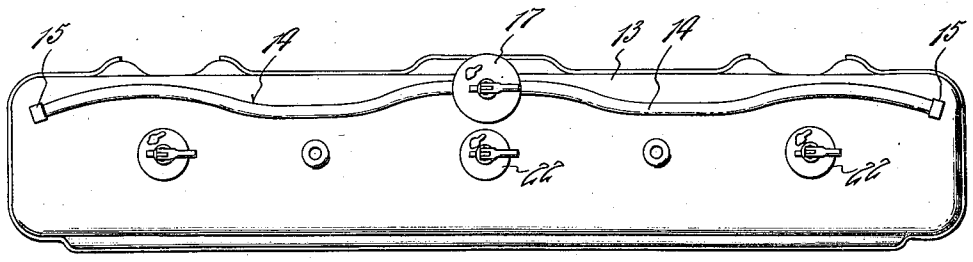


Fig. 5.

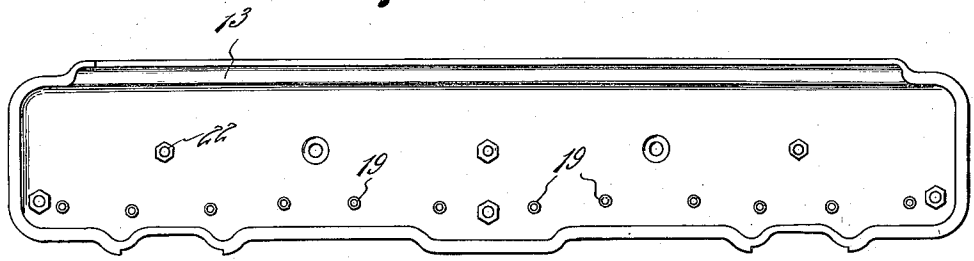
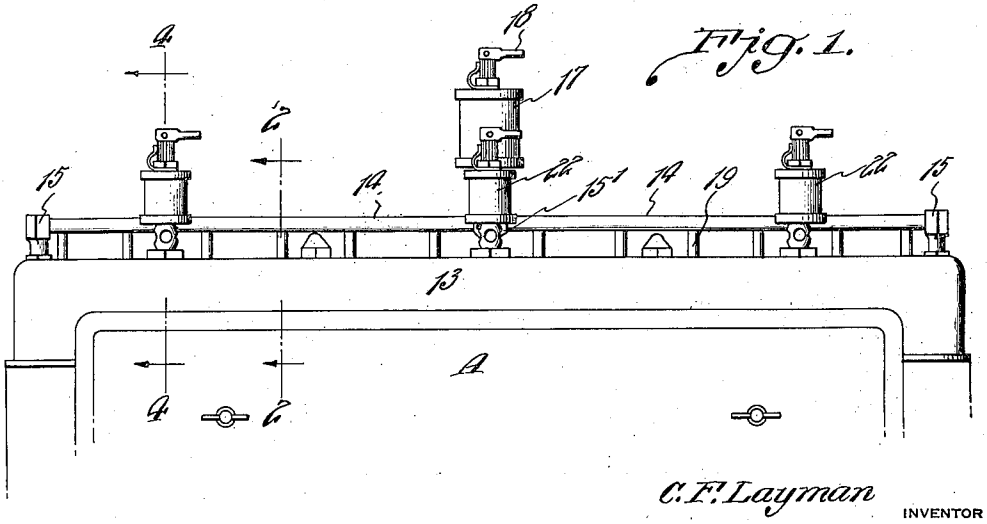


Fig. 1.



C. F. Layman INVENTOR

BY Victor J. Evans ATTORNEY

W. H. Markwood
N. Allison
WITNESS:

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C. F. LAYMAN

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Fig. 2.

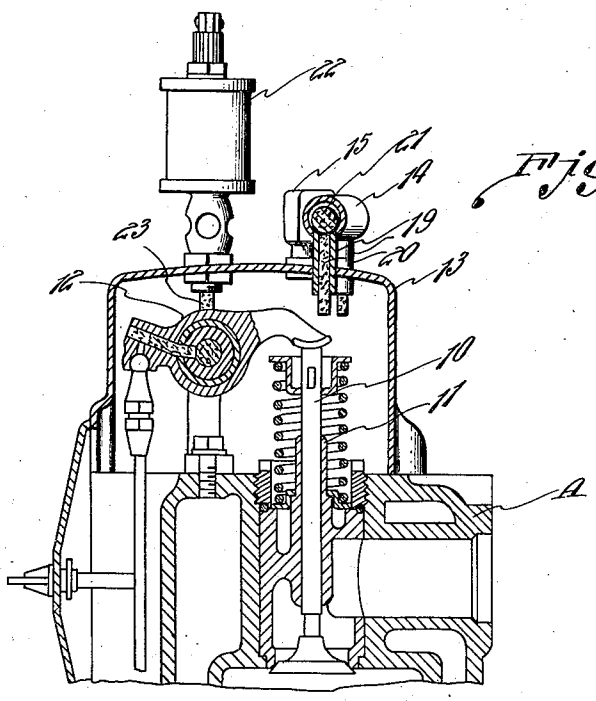
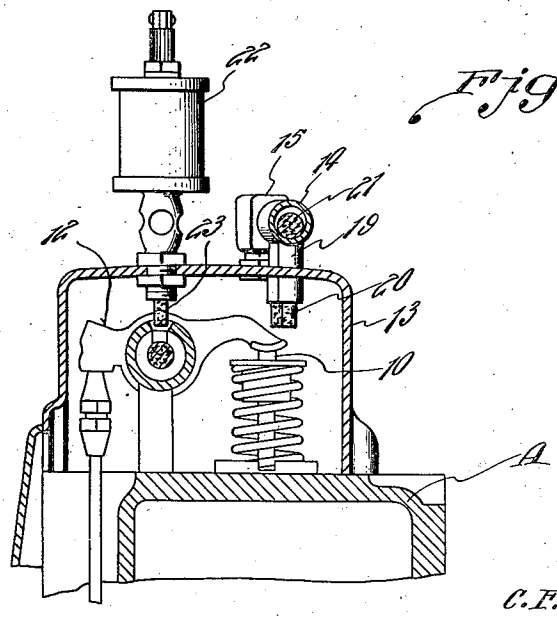


Fig. 4.



C. F. Layman
INVENTOR

BY Victor J. Evans
ATTORNEY

A. M. Markward
J. W. Allison
WITNESS:

Patented Apr. 22, 1924. 1,491,710

UNITED STATES PATENT OFFICE.

CLARENCE F. LAYMAN, OF VALLEJO, CALIFORNIA, ASSIGNOR OF ONE-HALF TO ARCHIBALD DICKSON, OF VALLEJO, CALIFORNIA.

AUTOMATIC VALVE-STEM GUIDE AND ROCKER-ARM WICK LUBRICATOR.

Application filed March 12, 1923. Serial No. 624,489.

To all whom it may concern:

Be it known that I, CLARENCE F. LAYMAN, a citizen of the United States, residing at Vallejo, in the county of Solano and State of California, have invented new and useful Improvements in Automatic Valve-Stem Guides and Rocker-Arm Wick Lubricators, of which the following is a specification.

This invention contemplates a novel construction of means for automatically lubricating the valve stems and guides, as well as the rocker arms and bearings therefore of valve in the head motors, so that difficulty usually experienced with sticking of the valves, due to the absence of lubricant is eliminated as is also the trouble of oiling the above mentioned parts from time to time.

In carrying out the invention it is my purpose to equip the cover or casing for over head valves with a plurality of lubricant cups or reservoirs, and associate with these cups a plurality of wicks which convey lubricant in proper quantities from the source of supply to the parts to be lubricated.

The nature and advantages of the invention will be better understood when the following detailed description is read in connection with the accompanying drawings, the invention residing in the construction, combination and arrangement of parts as claimed.

In the drawings forming part of this application, like numerals of reference indicate similar parts in the several views, and wherein:

Figure 1 is a side elevation of a motor showing the invention associated with the cover or casing as above referred to.

Figure 2 is a longitudinal sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a top plan view.

Figure 4 is a transverse sectional view taken on the line 4—4 of Figure 1.

Figure 5 is a bottom plan view of the casing showing the arrangement of the various wicks above referred to.

Referring to the drawings in detail, A indicates generally a motor of the valve in the head type, wherein the valve stems and guides therefor are indicated at 10 and 11 respectively, while the rocker arms for said valves are represented at 12. These parts are concealed from view by a cover or casing 13 of well known construction, which is bolted or otherwise suitably secured to the body of the motor.

In accordance with the present invention, I mount upon the casing or cover 13, a pipe 14 which is coextensive in length with the length of the cover and terminally threaded to suitable supports 15. This pipe 14 is preferably made in two sections, and the adjacent ends thereof are threaded into a valve body 15 which is arranged approximately midway between the ends of the cover or casing 13. This valve body supports an oil reservoir 17 of well known construction equipped with a needle valve 18, which controls the admittance of oil into the pipe 14. As shown the pipe is arranged to one side of the longitudinal center of the cover or casing 13 in an out of the way position, and the pipe contains lengths of wicks which absorb the lubricant admitted to the pipe from the reservoir 17. Depending from the pipe sections 14 is a plurality of similar pipes 19 which pass through openings in the cover or casing 13. Each pipe 19 receives a wick 20 which conveys lubricant from the main wick 21 in the pipe 14 to the valve stems and guides as shown in Figure 2. Also mounted upon the cover or casing 13 is a plurality of oil cups or reservoirs 22 of the same construction as the reservoir 17, but considerably smaller than the latter. These reservoirs open on the underside of the cover or casing 13, and each is equipped with a wick 23 which conveys the lubricant from the particular reservoir to the adjacent rocker arms and bearings 12 as shown in Figure 4. Obviously, it is only necessary to saturate the various wicks with lubricant from the adjacent reservoir by opening the needle valves thereof, and subsequently close the valves leaving the wicks to maintain the valve stems, and guides and rocker arms lubricated. This need only to be done occasionally, and eliminates the trouble and difficulty of lubricating these parts by the ordinary oil can which frequently necessitates the removal of the cover or casing 13 from the head of the motor. Inasmuch as the parts referred to are automatically maintained lubricated, the motor at all times operates in an efficient manner inasmuch as sticking of the valves and missing of the motor, which

is always the result of absence of lubricant, will be eliminated.

While it is believed that from the foregoing description, the nature and advantages of the invention will be readily apparent, I desire to have it understood that I do not limit myself to what is herein shown and described and that such changes may be resorted to when desired as fall within the scope of what is claimed.

Having thus described the invention, I claim:

In a valve in the head motor including a cover for said valve, means for lubricating the valve stems, guides and rocker arms, said means including a pipe supported upon the cover, a main oil reservoir supported by the pipe and communicating therewith, a wick arranged in the pipe and adapted to be saturated with lubricant from said reservoir, a plurality of smaller pipes depending from the first mentioned pipe and passed through openings in said cover, a wick arranged in each smaller pipe and adapted to convey lubricant to the adjacent valve stems and guides, additional oil reservoirs supported by the cover, and means for conveying the lubricant from the last mentioned reservoirs to the adjacent rocker arms and bearings therefor.

In testimony whereof I affix my signature.

CLARENCE F. LAYMAN.