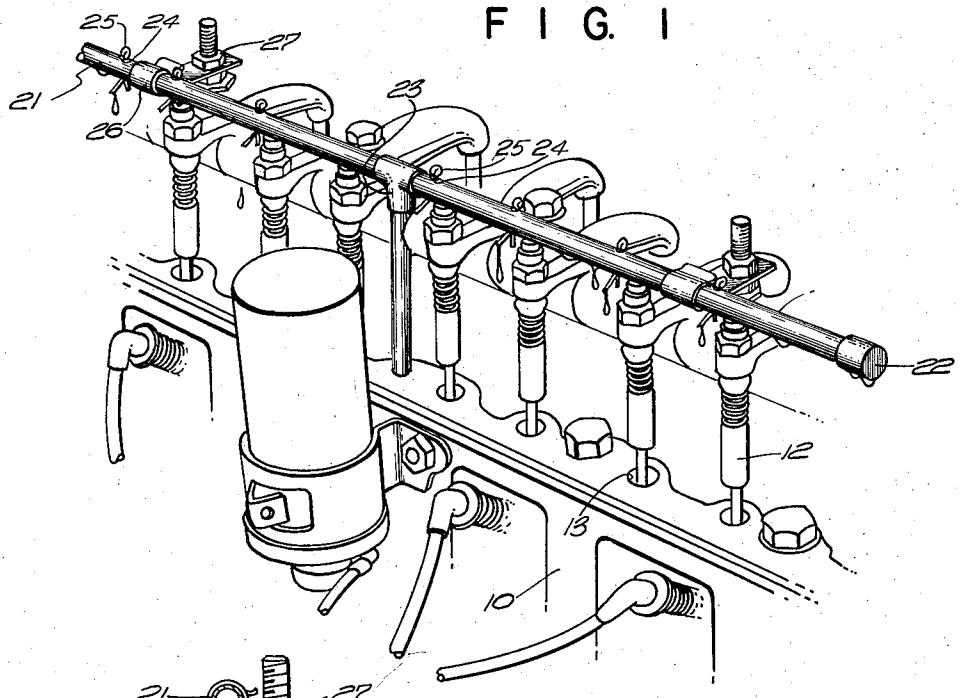
Feb. 27, 1962 B. H. MOYE 3,022,862

AUXILIARY OIL DISTRIBUTOR

Filed July 19, 1960

FIG. 1



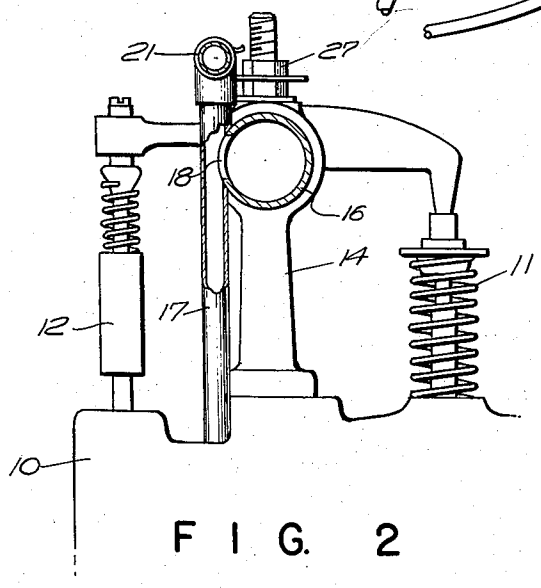


FIG. 2

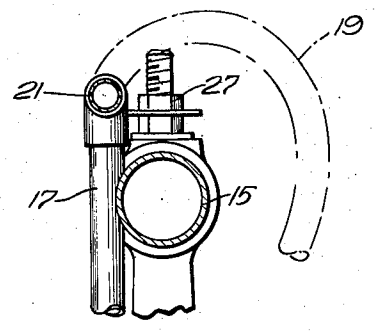


FIG. 3

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AUXILIARY OIL DISTRIBUTOR

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1 Claim. (Cl. 184—6)

My present invention relates to the automotive art and more particularly to an auxiliary oil distributor for engines having overhead valves.

The principal object of the present invention is to provide means for the even distribution of oil to the overhead valve assembly of the automotive engine.

Another object of the present invention is to provide an auxiliary oil distributor which is simple and easy to mount and attach to the engine oil distributing system.

Another object of the present invention is to provide an auxiliary oil distributor which can be installed to replace clogged oil lines on the upper part of an overhead valve engine.

A further object of the present invention is to provide an auxiliary oil distributor which eliminates a great deal of labor involved in opening oil lines.

Another object of the present invention is to provide an auxiliary oil distributor which is simple in construction and easy and economical to manufacture and install.

With the above and other objects and advantageous features in view my invention consists of a novel arrangement of parts more fully disclosed in the detailed description following in conjunction with the accompanying drawings and more particularly defined in the appended claim.

In the drawings,

FIG. 1 is a perspective view of the upper portion of an overhead valve engine having an auxiliary distributor of the present invention.

FIG. 2 is a transverse section of the construction shown in FIG. 1.

FIG. 3 is a transverse section showing the mounting of the auxiliary distributor.

Overhead valve engines are usually of the six cylinder type. The valves are aligned on one side of the cylinder head and the cam operated push rods are aligned at the opposite side of the cylinder head. Posts are provided in alignment between the two rows and rocker arms are pivotally mounted on a shaft held by the posts for opening and closing the valves. In a six cylinder engine there are twelve valves, twelve push rods, and twelve rocker arms. Each push rod is raised and lowered by a cam with its upper end bearing against an adjustable screw at the end of the rocker arm. It is necessary to lubricate the rocker arm and the push rod. This is accomplished by making the rocker arm supporting shaft hollow. Oil is pumped from the engine into the hollow shaft. At each rocker arm there is a small opening so that the oil squirts out, runs along the rocker arms and theoretically lubricates all the parts. Since the oil is under pressure an overflow line is also supplied for returning the excess oil to the engine. This arrangement has been found extremely unsatisfactory. The oil reaching the push rod and its contact with the end of the rocker arm is haphazard and often not enough so that there is a considerable wear at this point. The small openings on the rocker arms become clogged and the rocker arms themselves are then without lubrication. To clean the openings it is necessary for the mechanic to remove the entire rocker arm assembly, take out the shaft, clean out the hollow shaft and openings and replace the assembly. This is a considerable amount of work. Therefore, some mechanics block the overflow pipe to try to force the oil pressure through the clogged openings. The average engine does not build up sufficient oil pressure for this purpose and it is found that the clogging will continue.

The present invention provides an auxiliary oil distributor which can readily be mounted on the engine and which provides a positive flow of oil to affected parts regardless of the clogging of the holes. Furthermore, if the device of the present invention should become clogged it can be removed and cleaned in a matter of minutes without disturbing the engine. The device of the present invention can be installed in place of the complicated and lengthy repair of the oil distributing shaft. However, in actual practice it has been found desirable to install the device of the present invention on new engines since it supplies a positive flow of oil to the necessary places on the engine head.

Referring to the drawings, the figures illustrate a conventional six cylinder engine with overhead valves. The engine head or block **10** is provided at one side with a row of valves **11** and at the opposite side with push rods **12** extending from openings **13** in the engine block. Mounted on the engine are a plurality of supports **14** in alignment between the valves **11** and the push rods **12**. Mounted on the supports **14** is a hollow shaft **15** closed at both ends. The shaft **15** is split at the center to provide a gap bridged by a collar **16** which forms an oil distributor. Referring to FIG. 2, the pressure line **17** from the engine extends vertically at a tangent to the distributor **16**. At the point of contact there is an opening **18** which permits the oil to flow from the line **17** into the distributor. The pressure line **17** extends a short distance vertically above the distributor **16** and then is curved over the distributor and downwardly at **19** (in dotted lines in FIG. 3) to return the excess oil to the engine. Each rocker arm is provided with an opening which communicates with the interior of the hollow shaft **15**. Oil under pressure comes through the tube **17** into the distributor **16** from there into the two sections of the hollow shaft **15** out through the openings and runs along the rocker arm lubricating the rocker arm mounting on the shaft **15** and lubricating the contact point with the push rods **12**.

The present invention provides an auxiliary lubricating system for a more direct distribution of the oil and for a means for distributing oil when the openings become clogged. To this end I provide an elongated hollow tube **21** having a removable closure cap **22** at each end. The tube **21** is provided intermediate its ends with a T-shaped fitting **23**. The tube **21** is provided with vertically aligned openings **24** corresponding to the rocker arms. In other words in the illustrated form there are twelve sets of openings extending through the top and bottom of the tube in vertical alignment. Each opening is provided with a cotter pin **25** which acts to restrict the opening and to direct the flow of oil. One leg of each cotter pin being allowed to remain in vertical position. This is necessary because the motor is usually mounted at a slight pitch and the oil would have a tendency to flow along the bottom edge of the tube towards one end instead of dropping at the required places. A pair of clamping members **26** are provided with one end forming a spring clamp around the tube and the other end comprising a forked end which is mounted beneath the nuts **27** on two of the spaced supports **14**. These nuts are used to hold the shaft **15** in position. The nuts are loosened sufficiently to allow the clamping members **26** to be slipped beneath them as shown in FIG. 2. The tube **21** is connected to the oil distributing system of the engine by cutting the overflow portion **19** to the pipe shown in dotted lines in FIG. 3 and removing it completely. The tube **21** is mounted in position in the clamps **26** and in this position the T-shaped fitting **23** will slip directly over the cut vertical portion of the inlet pipe **17**.

With the above arrangement the oil entering the pipe **17** will still enter the distributor **16** and the hollow shaft

15. If the openings are operating oil will ooze out of these openings as before. However, the overflow oil which would otherwise normally return to the engine without doing further work will enter the fitting 23 into the tube 21 and proceed to drip at the twelve cotter pins back on to the engine. Each cotter pin is positioned over a rocker arm and the oil will flow profusely along each rocker arm ensuring proper lubrication of the rocker arm and proper lubrication of the push rod contact. The operation of the auxiliary oiling tube 21 is thus independent of the original oil openings and the device will operate whether the openings are clogged or not.

If after long use the openings in the tube 21 also become clogged it is a simple matter to loosen the nuts 27, lift the tube and clamps from the motor, remove one of the ends 22 and blow out the tube and completely clean it. This is a much faster and easier operation than would be required to clean the shaft 15. An examination of the construction of the motor makes it obvious that the removal and cleaning of the hollow shaft 15 would require hours of work. I have thus provided a simple economical and readily assembled means for ensuring a proper distribution of oil to an overhead valve engine. The device can be installed or removed with a minimum of labor and without disturbing the valve settings. It will ensure an even flow of oil regardless of the condition of the original lubricating system at this point. Other advantages of the present invention will be readily apparent to a person skilled in the art.

I claim:

In an overhead valve gasoline engine having a hollow rocker arm shaft mounted above said engine on supports, an oil distributor intermediate the ends of said shaft, and a vertical oil line communicating with said oil distributor, the upper end of said oil line being normally extended to form an overflow pipe for the oil, an auxiliary oil distributor comprising an elongated hollow tubular member mounted in horizontal spaced parallel relation over said engine, a plurality of clips surrounding said tubular member, said clips being attached to said supports, said tubular member having aligned vertical openings over each of the said engine rocker arms, a cotter pin mounted in each pair of vertically aligned openings and bent to provide one horizontal and one vertical leg depending from said openings, and a vertical tubular portion extending from said hollow tubular member and over the upper end of said vertical oil line, whereby said auxiliary oil distributor will replace said overflow pipe.

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