H. J. WRIGHT.

OILING DEVICE FOR INTERNAL COMBUSTION ENGINE TIMERS.

APPLICATION FILED OCT. 24, 1919.

1,397,941. Patented Nov. 22, 1921.

Fig 1

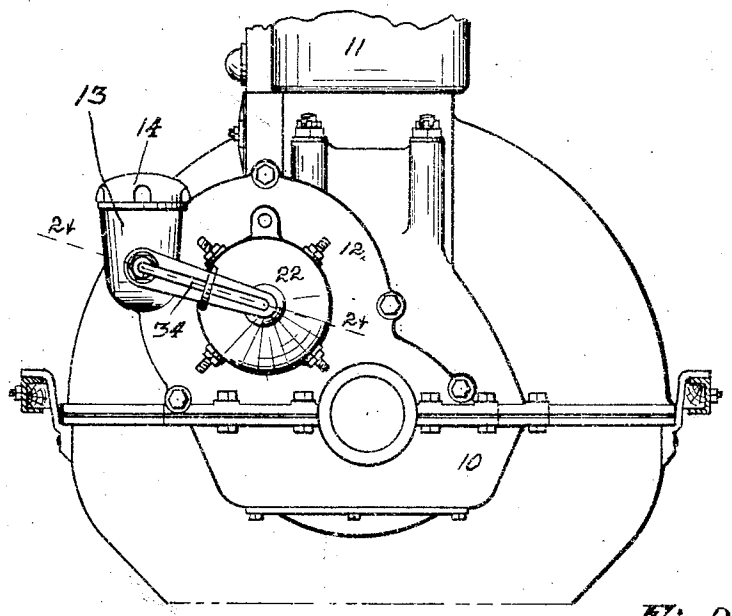


Fig 2

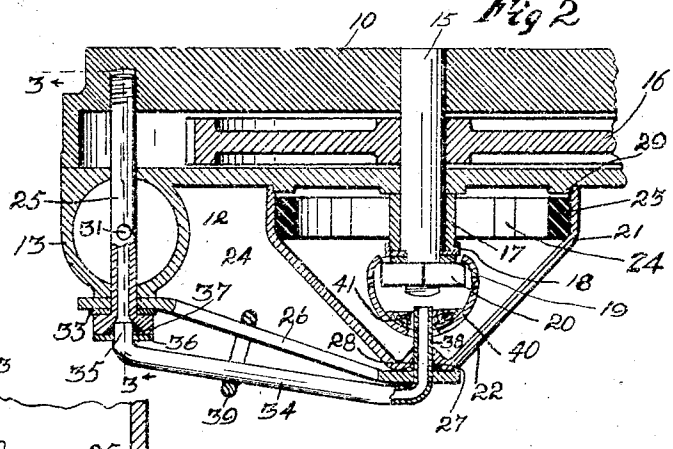
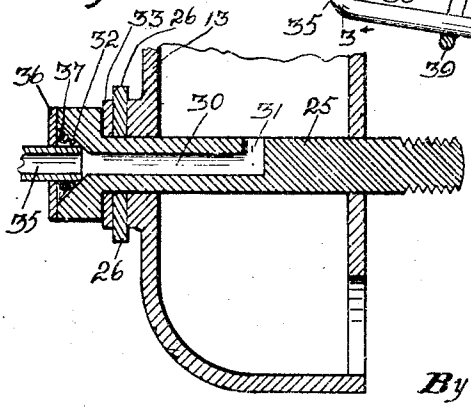


Fig 3



INVENTOR

W. J. Wright

By Drury & Bair Atty's.

UNITED STATES PATENT OFFICE.

HARRY J. WRIGHT, OF DES MOINES, IOWA.

OILING DEVICE FOR INTERNAL-COMBUSTION-ENGINE TIMERS.

1,397,941. Specification of Letters Patent. Patented Nov. 22, 1921.

Application filed October 24, 1919. Serial No. 333,080.

To all whom it may concern:

Be it known that I, HARRY J. WRIGHT, a citizen of the United States, and a resident of Des Moines, in the county of Polk and State of Iowa, have invented a certain new and useful Oiling Device for Internal-Combustion-Engine Timers, of which the following is a specification.

The object of my invention is to provide an oiler for the timing devices of an internal combustion engine, and particularly designed for the timing device in common use on certain makes of cars.

More particularly it is my object to provide an oiling device which can be readily installed on a timer in connection with the regular oiling system without interfering with the regular parts and with the addition of a minimum number of simple parts.

With these and other objects in view my invention consists in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, in which:

Figure 1 shows a front elevation of an engine equipped with an automatic oiling device embodying my invention.

Fig. 2 shows a sectional view taken on the line 2—2 of Fig. 1; and

Fig. 3 shows a horizontal, sectional view taken on the line 3—3 of Fig. 2.

In the drawings herewith which are illustrative of my invention, I have used the reference numeral 10 to indicate generally the crank case of an internal combustion engine.

Above the crank case 10 is the ordinary engine block 11. At the front of the crank case is the timing gear casing 12.

At one side of the timing gear casing is the oil receiving member 13 having the removable cover 14.

Suitably mounted and projected through the timing gear casing 12 is a shaft 15, on which within the timing gear casing is a gear 16.

Mounted on the shaft 15 forwardly of the timing gear casing 12 is a hub 17 which carries the contact arms not shown.

On the forward end of the shaft 15 in front of the sleeve 17 is a small cap 18 forwardly of which is the washer 19 and the nut 20.

A timer cover cap 21 is used for covering the timing mechanism in the forward end of the shaft 15, and is provided with a forwardly extending tapered end 22. Within the inclined portion of the cover cap 21 is an annular disk 23 of insulating material having set therein at proper intervals the timer contact points 24.

It will be understood that the cover cap 21 is mounted for limited rotation and is arranged to be connected with the ordinary spark control lever.

In a well-known car (the Ford) there is extended through the oil cup 13 and into the engine block 10 a bolt 25. Mounted on the bolt 25 just forwardly of the oil cup 13 is an arm 26 which inclines toward the forward end of the cover cap 21 and is provided with a lug 27 designed to fit into a recess 28 on the forward end of said cover cap. When the bolt 25 is screwed tightly into position the arm 26 will hold the cover cap 21 in proper position.

It will be understood that the rearward end of the cover cap fits over an annular shoulder or rib 29 on the forward face of the casing 12.

Where my oiling device is used I drill a hole 30 from the forward end of the bolt 25 to a point within the oil cup 13.

At the inner end of the hole 30 is a lateral extension 31 designed to extend upwardly in the oil cup 13 when the parts are assembled.

The outer end of the head of the bolt 25 is countersunk as at 32 at the outer end of the opening 30 and I preferably mount on the bolt between said head and the arm 26 a lock nut 33, whereby the bolt may be locked in position with the extension up.

There is provided an oil conducting pipe 34 having at one end an annular extension projected into the countersunk portion 32 of the head of the bolt 25.

On said extension, which is indicated by the reference character 35, spaced from the end thereof, is fixed a washer 36, and I preferably place packing 37 in the countersunk portion of the head, as illustrated in Figs. 2 and 3.

At the other end of the oil conducting pipe 34 is an angular extension 38 projected through suitable openings in the arm 26 and the forward end of the cap 23 toward the shaft 15.

It will be seen that the pipe 34 and arm 26 are so inclined with relation to each other

that they converge at their ends adjacent to the timer cap 23 and diverge at their ends adjacent to the bolt 25.

There is mounted on the arm 26 and the pipe 34 a resilient ring 39 which may be forced from position near the cap 21 toward the opposite ends of the arm 26 and pipe 34, for firmly gripping said arm and pipe together, as illustrated in Fig. 2.

On the inner end of the extension 38 is a cup or the like 40 which is of somewhat resilient material and has its open inner end crimped or bent around the shaft 15. The parts are so arranged that oil passing downwardly through the cup 13 will to some extent pass into the openings 31 and 30 and thence through the pipe 34 to the cup 40, and from thence to the shaft 15 for lubricating said shaft.

It will thus be seen that I have provided a simple attachment whereby the bearing at the forward end of the shaft which operates the timer may be lubricated.

The cup 40 is preferably filled with suitable absorbent packing material 41 which will take up a considerable amount of oil when the oil is poured through the cup 13 and will slowly give off such oil to the shaft 15.

Some changes may be made in the construction and arrangement of the parts of my device without departing from the essential spirit and purpose of my invention, and it is my intention to cover by my claims any modified forms of structure or use of mechanical equivalents which may be reasonably included within their scope.

I claim as my invention:

1. In combination with a timer shell, and retaining spring therefor, an oil tube having an end portion bent and passing through the retaining spring and timer shell.

2. The combination of a shaft; a timer device element thereon; a movable cover member; a coacting timer device element received within said movable cover member; and an oiling pipe extended through said cover member substantially in line with said shaft, and connected with a suitable source of oil supply; said oiling device having on its end within said cover member a cup receiving the end of said shaft.

3. The combination of a shaft; a timer device element thereon; a movable cover member for a portion of said shaft; a coacting timer device element on the interior of said cover member; an oil cup; a conducting member projected into said oil cup; an oil pipe communicating with said conducting member and having a portion projected through said cover member toward said shaft for supplying oil to said shaft.

4. The combination of a shaft; a timer device element thereon; a cover member for one end of said shaft; a coacting timer device element on the interior of said cover member; said cover member having at one end a recess; an oil cup; a bolt projected into said oil cup; an arm mounted on said bolt having a portion for engaging said cover member for holding it in position; a passage through said bolt from the interior of said oil cup to the outside of said cup, said bolt having a counter-sunk portion at its outer end; a pipe having an end projected into said counter-sunk portion, and another portion projected through said arm and through said cover cup to the interior thereof; said pipe and arm being arranged in substantially the same plane but not parallel; and means for clamping said pipe to said arm.

5. The combination of a shaft; a timer device element thereon; a cover member for one end of said shaft; a coacting timer device element on the interior of said cover member; said cover member having at one end a recess; an oil cup; a bolt projected into said oil cup; an arm mounted on said bolt having a portion for engaging said cover member for holding it in position; a passage through said bolt from the interior of said oil cup to the outside of said cup said bolt having a counter-sunk portion at its outer end; a pipe having an end projected into said counter-sunk portion, and another portion projected through said arm and through said cover cup to the interior thereof; said pipe and arm being arranged in substantially the same plane but not parallel; and means for clamping said pipe to said arm, said pipe having on its end within said cover member a cup receiving one end of said shaft.

6. A device of the class described comprising an open reservoir within the filling path of travel of lubricant for the motor, a conduit communicating between the interior of the reservoir and the timer case, and retaining means for the conduit.

Des Moines, Iowa, September 19, 1919.

HARRY J. WRIGHT.