Dec. 17, 1929. G. A. MONUMENT 1,739,728

COMBINED PRIMER AND LUBRICATOR FOR GASOLINE ENGINES

Filed July 10, 1928

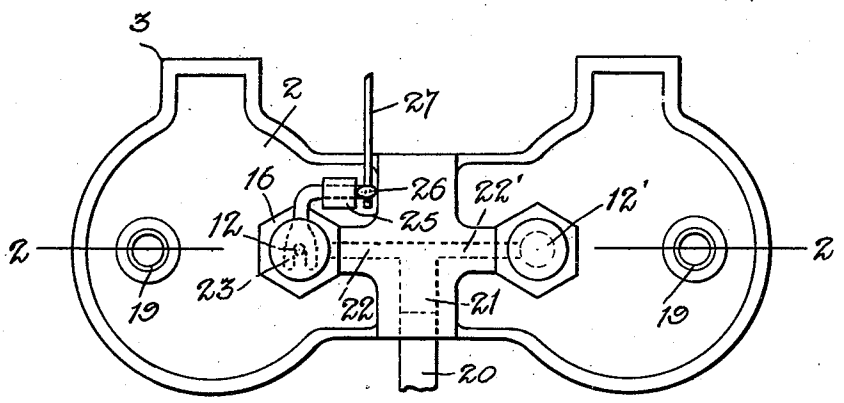



Fig. 1.

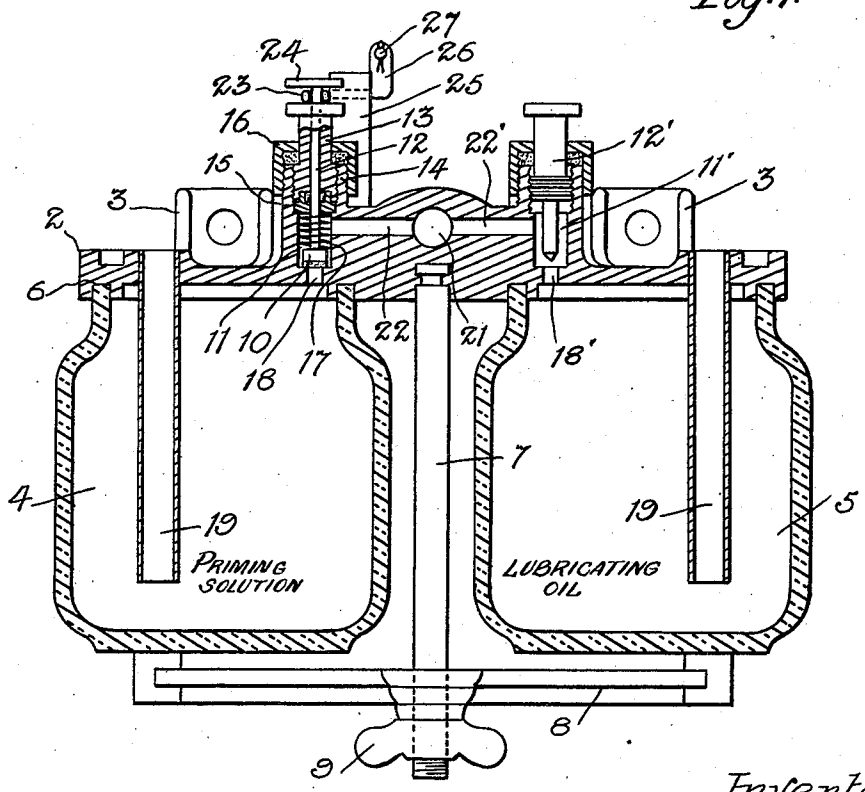



Fig. 2.

Inventor.
Geo. A. Monument
By Egerton R. Case,
Atty.

Patented Dec. 17, 1929

1,739,728

# UNITED STATES PATENT OFFICE

GEORGE A. MONUMENT, OF TORONTO, ONTARIO, CANADA, ASSIGNOR OF ONE-THIRD TO ARCHIBALD EDGAR WILSON AND ONE-THIRD TO HOWARD CAMPBELL HOOPS, BOTH OF TORONTO, CANADA

## COMBINED PRIMER AND LUBRICATOR FOR GASOLINE ENGINES

Application filed July 10, 1928. Serial No. 291,512.

My invention relates to improvements in combined primers and lubricators for gasoline and like engines, and the object of the invention is to provide a device for the purpose set forth, simple and sturdy in construction, and one that can be readily operated from the seat of the automobile, and in the following specification and the drawings forming part thereof, I shall describe and illustrate my invention, and what I claim as new will be set forth in the claims forming part of this specification.

Fig. 1 is a plan view of my device, and Fig. 2 is a vertical longitudinal section on the line 2—2, Fig. 1.

In the drawings, like characters of reference refer to the same parts.

The device comprises a top plate or cover 2 which is suitably adapted to be coupled to any suitable support. In the construction shown, this plate or cover is provided with pierced attaching lugs 3.

4 is the container for the priming solution, and 5 is the container for the lubricant. The upper edges of said containers are set in annular grooves 6 formed in the underside of the plate or cover 2. Any suitable means may be employed to hold said containers in position: a suitable means for this purpose comprises a rod 7 suitably coupled at its upper end to the plate or cover 2, and located between said containers. This rod passes centrally through a cross bar 8, and by means of the nut 9 on said rod, said cross bar is held in engagement with the said containers with sufficient pressure to hold them against the plate or cover 2. 10 is a valve operating in a chamber 11 formed in the plate or cover 2, and the stem 12 of this valve passes through a sleeve 13 threaded into the circular flange 14 forming part of the plate or cover 2. The sleeve 13 is provided at its inner end with any suitable type of stuffing box 15 through which the stem 12 passes. 16 is a cap which contains suitable packing, and this cap screws over the outer threaded surface of the flange 14. Positioned between the head of the stuffing box 15 and the valve 10 is a spring 17 which normally keeps the valve 10 on its seat to close the port 18 formed in the plate or cover 2 and opening from the container 4. Carried by the top plate or cover 2 through openings therethrough are air tubes 19. These air tubes extend into the containers 4 and 5. By means of a conduit 20 carried by the plate or cover 2 and communicating with the manifold 30 of the engine communication is had at certain times through the ports 21 and 22 with the interior of the container 4.

When it is desired to prime an engine, the operator lifts the valve 10 from off its seat, and by reason of the movement of the pistons in the engine (not shown), the pressure within the cylinders thereof is such that air is caused to pass through the air tube 19 within the container 4 and when passing through the priming solution it becomes saturated therewith and passes through the ports 18, 22 and 21 and through the conduit 20 to the manifold 30 and thence to the engine cylinders 31.

Obviously the priming solution is only used to start up the engine and any suitable means may be used to lift the valve 10 from off its seat: the preferred means for this purpose embraces a forked arm 23 which straddles the stem 12 and is located beneath the disc 24 carried by said stem which forms means whereby movement upward is conveyed by said forked arm to said stem 12. The said arm 23 is pivotally mounted in a support 25, and its inner end 26 is disposed vertically to support the rod 27. This rod passes through the dash (not shown) of the automobile in convenient position to the operator so that he may manipulate same by hand, for the purpose stated.

The valve 10 preferably provides for plenty of clearance with the walls of the chamber 11 so that when this valve is lifted off its seat, the priming solution passing through the port 18 may readily pass around said valve on its way to the port 22.

12′ is a needle valve operating in the chamber 11′, and this valve is adjusted to open the port 18′ formed in the plate or cover 2 and opening into the container 5. A port 22′ connects the chamber 11′ with the port 21. As air will pass into the container 5 through

the air tube 19 mounted therein, the operation of the pistons within the cylinders will cause this air to pass through the lubricant within said container 5 and through the ports already mentioned and the conduit 20 to ultimately reach the cylinders. This air will be saturated with the lubricant.

It is to be noted that the valve 10 is only moved from off its seat when priming the engine to start it up; whereas the needle valve 12′ is left in position to open the port 18′ so that a continuous supply of lubricant-ladened air will be provided the engine while running.

What I claim as my invention is:

1. A combined primer and lubricating device embracing a cover; a pair of containers one containing the priming solution and the other the lubricant, into each of which opens an outlet port formed in said cover; means whereby said containers are held in cooperative relationship with said cover; a constantly open air conduit opening through said cover and depending into each of the said containers; the said cover being provided with chambers in communication with said outlet ports, and being further provided with ports opening from said chambers into a common outlet port; valves in said chambers to control the passageway through said outlet ports, and a conduit adapted to connect said device with the intake manifold of an internal combustion engine.

2. In a combined primer and lubricating device as set forth in claim 1, the priming solution chamber controlling valve governed by both an automatic spring closing device and a manually operable opening means.

GEORGE A. MONUMENT.