J. A. McDONALD & J. H. HARRIS.

CARBURETER ATTACHMENT.

APPLICATION FILED JUNE 5, 1917.

1,260,005. Patented Mar. 19, 1918.

FIG-1

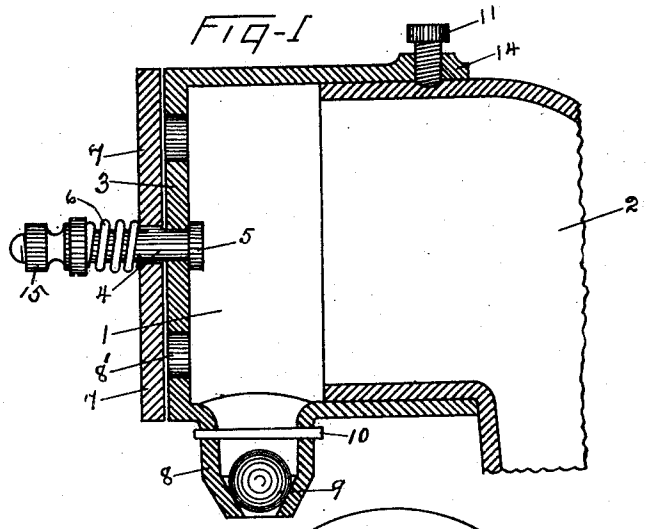


FIG-2

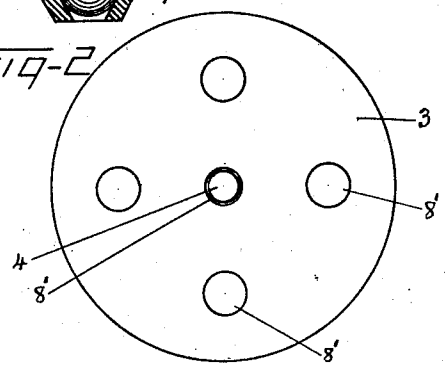
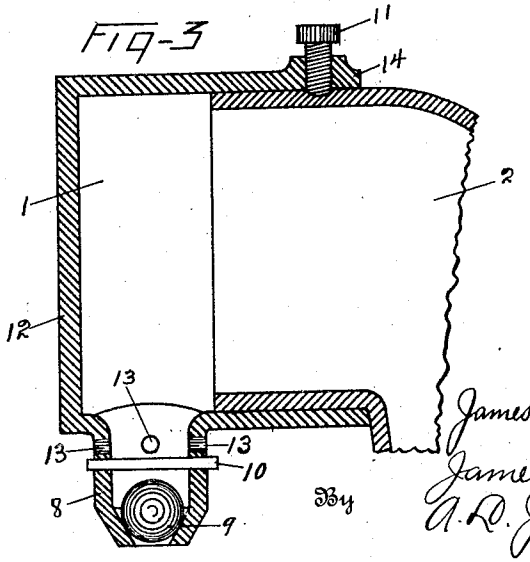


FIG-3



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and
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UNITED STATES PATENT OFFICE.

JAMES A. McDONALD AND JAMES H. HARRIS, OF FORT WORTH, TEXAS, ASSIGNORS, BY DIRECT AND MESNE ASSIGNMENTS, OF ONE-THIRD TO SAID McDONALD, ONE-THIRD TO E. B. POWER, OF FORT WORTH, TEXAS, AND ONE-THIRD TO J. D. ZOOK, OF WACO, TEXAS.

CARBURETER ATTACHMENT.

1,260,005. Specification of Letters Patent. **Patented Mar. 19, 1918.**

Application filed June 5, 1917. Serial No. 172,856.

To all whom it may concern:

Be it known that we, JAMES A. McDONALD and JAMES H. HARRIS, both citizens of the United States of America, residing at Fort Worth, in the county of Tarrant, State of Texas, have invented certain new and useful Improvements in Carbureter Attachments, of which the following is a specification.

Our invention relates to carbureter attachments for motor vehicles, and the object is to provide an attachment for regulating the admission of air to the intake of the carbureter, for reducing the consumption of gasolene, for relieving the back pressure which sometimes occurs, and to provide an attachment by which more power is obtained with a less consumption of gasolene. Other objects and advantages will be fully explained in the following description and the invention will be more particularly pointed out in the claims.

Reference is had to the accompanying drawings which form a part of this application.

Figure 1 is a vertical section of the attachment applied to the intake nozzle of a carbureter. Fig. 2 is an end view of the attachment with the relief disk removed, showing the openings for escape of back pressure. Fig. 3 is a similar view to Fig. 1, but showing a variation in the back pressure regulator.

Similar characters of reference are used to indicate the same parts throughout the several views.

The attachment includes a cap 1 which is attached to the intake nozzle 2 of a carbureter. The cap has a boss 14 on the inner end and a set screw 11 secures the cap 1 on the nozzle 2. The bottom 3 of the cap has perforations 8′ for the passage of the back pressure fluid. The cap 1 is provided with an intake nozzle 8 and a ball valve 9 normally closes the intake when the motor is not in action. A pin or stop 10 will prevent the valve 9 from being drawn out of the nozzle 8 by the suction. The perforations 8′ are normally closed in action by a disk 7 which is loosely mounted on the outer end of the cap 1. The disk 7 is connected to the cap 1 by a bolt 4 which projects through the disk loosely and has a head 5 on the inside of the cap and a nut 15 on the end of the bolt with a spring 6 on the bolt between the disk 7 and the nut 15. In action, the motor will draw in air past the valve 9 and the disk 7 will close the perforations 8′. In case of back pressure, the valve 9 will close the opening through the valve, but the disk 7 will yield by reason of the spring 6 and let the pressure fluid pass out through the perforations 8′. The operation of the valve 9 will be readily understood. When there is need of air in the mixing with gasolene vapor, the valve 9 will open to let in the proper amount of air and the valve 9 will be opened more or less according to the requirement of air because the valve rests by gravity.

The variation shown in Fig. 3 contains different means for escape of back pressure. The nozzle 8 has perforations 13 for the escape of the back pressure and the bottom 12 has no perforations and the disk is dispensed with by using the perforations 13.

What we claim, is,—

1. An attachment for carbureters comprising a cap for engaging the intake nozzle of a carbureter having perforations for escape of back pressure fluid, a disk held yieldingly against said cap for normally closing all of said perforations, an intake nozzle for said cap, and a gravity valve for closing said nozzle when not in use and for regulating in-flow of air when in use.

2. An attachment for carbureters comprising a cap for engaging the intake nozzle of a carbureter and having a boss thereon, a set screw projecting through said boss for binding said cap on the carbureter intake, said cap having perforations for escape of back pressure fluid, a disk mounted on the outside of said cap and normally closing said perforations but adapted to be separated from said cap by back pressure for escape of back pressure, an air intake nozzle formed on the lowest part of said cap, a gravity valve closing said nozzle when not in use and for regulating the admission of air in proportion to the strength of suction through the intake of the carbureter, and a pin for preventing displacement of said valve.

In testimony whereof, we set our hands, this 31st day of May, 1917.

JAMES A. McDONALD.
JAMES H. HARRIS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."