C. J. KLEIN.

MOISTENING DEVICE.

APPLICATION FILED OCT. 13, 1917.

1,272,275. Patented July 9, 1918.

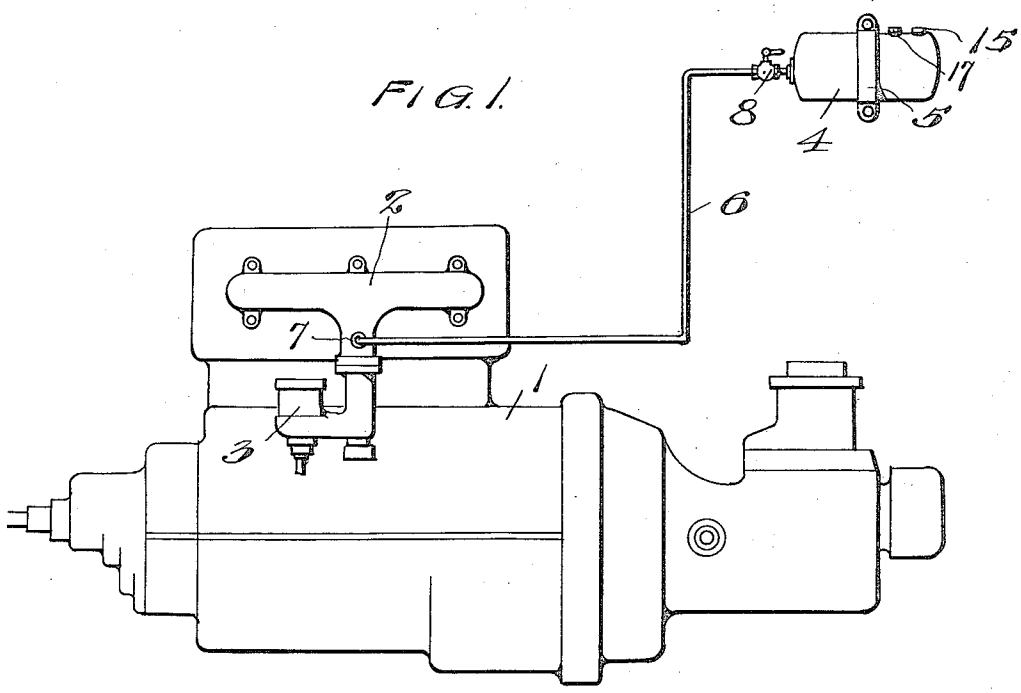


FIG. 1.

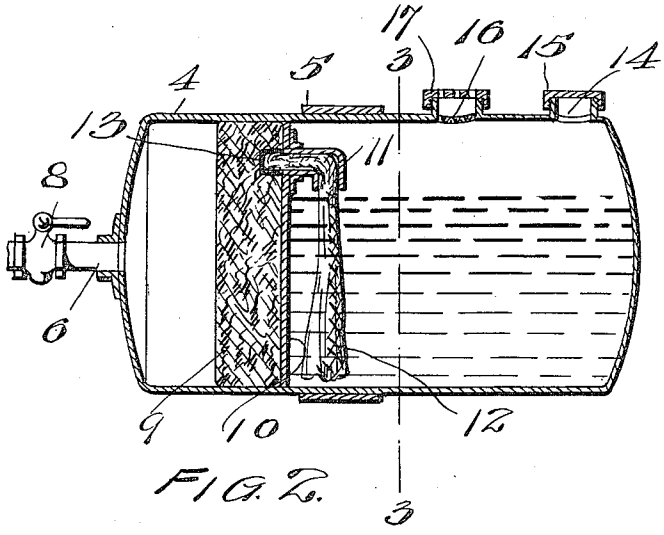


FIG. 2.

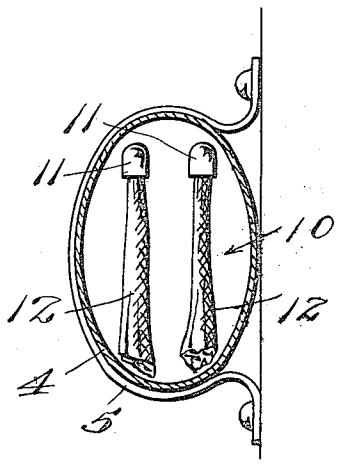


FIG. 3.

WITNESS

C. K. Davis

INVENTOR

C. J. KLEIN

BY

Herman A. Phillips

ATTORNEY

UNITED STATES PATENT OFFICE.

CARL J. KLEIN, OF MOUNT VERNON, ILLINOIS.

MOISTENING DEVICE.

1,272,275. Specification of Letters Patent. Patented July 9, 1918.

Application filed October 13, 1917. Serial No. 196,474.

To all whom it may concern:

Be it known that I, CARL J. KLEIN, a citizen of the United States, residing at Mount Vernon, in the county of Jefferson and State of Illinois, have invented certain new and useful Improvements in Moistening Devices, of which the following is a specification.

The present invention relates to improvements in moistening devices, and particularly to means for moistening the charge of fuel as it is fed to the cylinder of an internal combustion engine by supplying moist air to the gas charge as it passes through the manifold to the cylinder.

The primary object of the invention is the provision of means whereby an increased supply of air is obtained for the fuel charge; and an additional supply of water vapor to the explosion charge is provided with beneficial effect upon the running of the engine.

To this end the invention consists in certain novel combinations and arrangements of parts as will be hereinafter fully described, claimed, and illustrated in the drawings.

In the drawings I have illustrated one complete example of the physical embodiment of my invention constructed and arranged according to the best mode I have so far devised for the practical application of the principles of my invention.

Figure 1 is a view in elevation of an internal combustion engine with my invention applied thereto.

Fig. 2 is a longitudinal sectional view of the filtering tank.

Fig. 3 is a sectional view at line 3—3 of Fig. 2, looking toward the left.

In order to illustrate the preferred form of my invention I have utilized a well known type of engine indicated at 1, which is provided with the usual manifold 2 and the carbureter 3, these parts being essential to the proper equipment of the engine with my invention.

In the practical application of the invention I utilize a copper tank as 4, which may be cylindrical in cross section, or oval shaped, as shown in the drawings, and in any event the tank may be attached, as by the metallic band 5, either to the engine itself or to the dash board of an automobile, when so used.

The tank or receptacle 4 is connected with the engine through the medium of a copper pipe 6, preferably coupled to the manifold as at 7 and provided with a pet cock 8 to control the passage of moisture through the pipe 6.

Within the tank 4 is located a felt partition 9, which performs the function of a filtering medium, and is retained in place through its connection with the transverse metallic partition 10, fixed in the tank, and to which the felt filter may be attached. Near its upper end the partition 10 is provided with a pair of pipe elbows 11, 11 opening through the partition and designed to retain, each, a wick member 12, the upper ends of the wicks passing through the elbows and into a recess 13 in the filter member. Thus when water is present in the tank as indicated, it passes, by capillary attraction up through the wicks into the felt filter and moistens the felt so that the water may be easily evaporated therefrom and pass out through the open valve 8 and pipe 6 through coupling 7 to the manifold.

Water is supplied to the receptacle or tank through inlet 14 which is closed by a cap 15, and air is admitted to the tank through screened opening 16 which is closed by the perforated cap 17.

From the above description taken in connection with my drawings it is evident that, as the water is carried to the absorbent filter 9 by capillary attraction, the suction created by the operation of the piston in the cylinder of the engine, will draw the moisture from the tank through the pipe 6 into the manifold, thus mixing with the gas charge an additional supply of filtered, moistened air, which by its presence in the charge and its admission to the cylinder, keeps the walls of the engine free from carbon deposits, relieves all friction and thus gives a smooth running motor. By the utilization of this device, it is impossible for dust or other foreign substance to enter the manifold, and the charge is thus retained pure.

What I claim is:—

In a moistening device for the purpose described, the combination of a tank, a partition dividing the tank into a water chamber and a water vapor chamber, said parti

tion having apertures near its top, pipe elbows in the water chamber secured around said apertures, absorbent filtering material secured on the opposite side of the partition, capillary wicks extending from near the bottom of the water chamber through said elbows and apertures to said filtering material, water and air inlets to said water chamber and an outlet pipe from said water vapor chamber.

In testimony whereof I affix my signature in the presence of two witnesses.

CARL J. KLEIN.

Witnesses:
W. B. PHILLIPS,
M. L. BLEDSOE.