

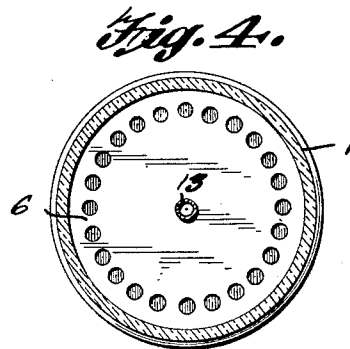
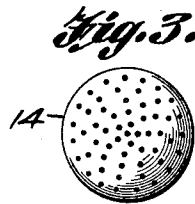
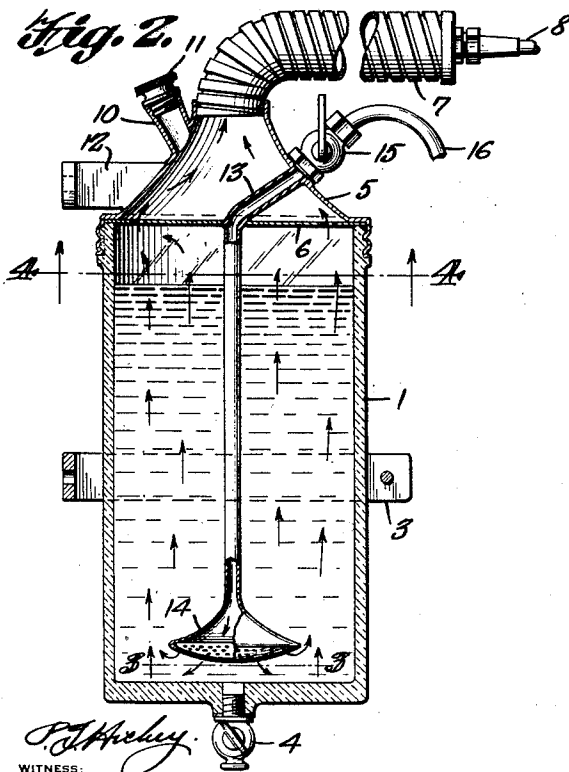
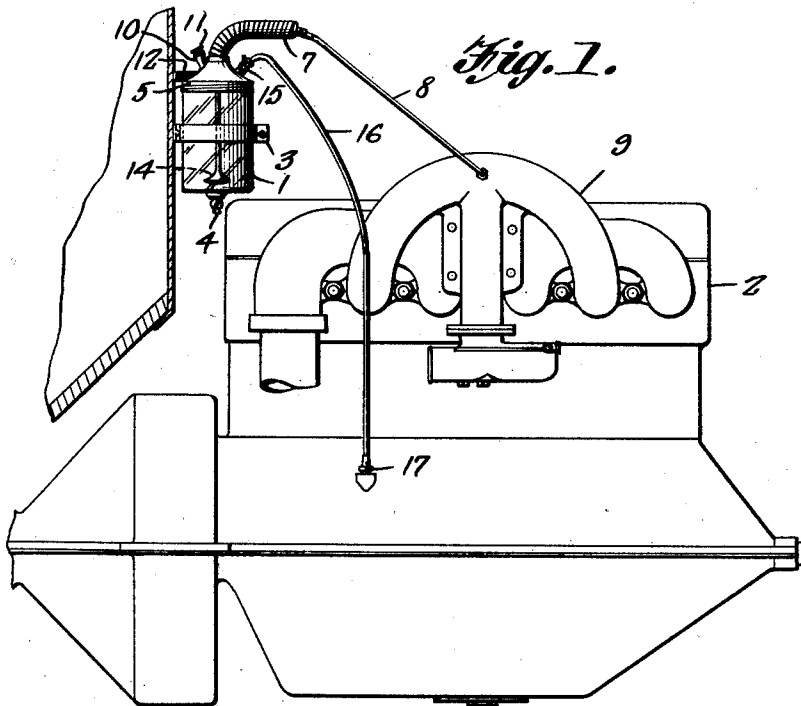
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1,960,982

VAPOR AIR MIXER AND GAS SAVER

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VAPOR AIR MIXER AND GAS SAVER

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1 Claim. (Cl. 261—121)

This invention relates to mixers adapted for internal combustion engines to cause smoother and quieter operation thereof and to retard the accumulation of carbon and the necessity of frequent grinding of valves and the cleaning of spark plugs and to aid in maintaining the engine cooler and conserving consumption of lubricant, and has for the primary object, the provision of a device of the above stated character which may be easily attached to an engine for supplying along with the fuel moist and filtered air taken from the crank case of the engine, removing therefrom gases and other fumes.

With this and other objects in view, this invention consists in certain novel features of construction, combination and arrangement of parts to be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawing, in which

Figure 1 is a side elevation partly in section illustrating a mixer attached to an internal combustion engine and constructed in accordance with my invention.

Figure 2 is a vertical sectional view illustrating the mixer.

Figure 3 is a sectional view taken on the line 3—3 of Figure 2.

Figure 4 is a sectional view taken on the line 4—4 of Figure 2.

Referring in detail to the drawing, the numeral 1 indicates a container preferably constructed of metal, glass or any other suitable material and is removably supported adjacent an internal combustion engine 2 by a bracket 3 of the split type. The bottom wall of the container is provided with a drain valve 4 whereby sediment and foreign matter may be removed from the container when desired.

A substantially funnel shaped hood 5 is threaded to the upper end of the container and has clamped between itself and the container a perforated plate 6 acting as a strainer. The hood 5 is connected to a flexible pipe 7 to which a tube 8 is connected. The tube 8 is of a diameter considerably less than the diameter of the flexible tube 7 and is connected to the intake manifold 9 of the engine 2.

The hood 5 is provided with a filling neck 10 closed by a removable plug 11 whereby the container may be filled with water or a solution in cold weather which will not readily freeze. The hood 5 is provided with arms 12 adapted to be fastened to the support which carries the bracket

3 and cooperates with the bracket in firmly holding the device in position and provides means whereby the container 1 may be removed from the support by releasing the bracket 3 therefrom allowing the hood and other parts associated therewith to remain attached to the support.

An air inlet pipe 13 extends through the hood 5 and the plate 6 and terminates adjacent the bottom wall of the container in a flared perforated strainer 14. The pipe 13 is connected to a valve 15 located exteriorly of the hood and to which a tube 16 is connected. The tube is in communication with the interior of the crank case of the engine as shown at 17 whereby gases and other fumes may be taken from the crank case and drawn into the container at the bottom thereof for passage upwardly through the water purifying the gases or fumes and providing in the hood filtered air adapted to pass into the intake manifold of the engine by the suction therein during the running of the engine so as to mix with the fuel prior to entering the combustion chamber of the engine. The introduction of the moist and purified air with the fuel renders a smoother operating engine, reduces to a minimum the accumulation of carbon and also the removing of the fumes from the crank case aids in keeping the engine cool conserving the consumption of lubricant.

While I have shown and described the preferred embodiment of my invention, it will be understood that minor changes in construction, combination and arrangement of parts may be made without departing from the spirit and scope of my invention, as claimed.

Having thus described my invention, what I claim is:—

A mixer comprising a container having liquid therein, a closing hood threaded to the container for closing the latter, a perforated plate between the container and the hood and held to the container by said hood, a flexible tube connected to the hood, a tube of a diameter less than the diameter of the flexible tube and connected to the latter and to a source of vacuum, a pipe extending through the hood and plate and secured to the latter and terminating adjacent the bottom of the container in a perforated flared portion, a control valve connected to said pipe, and a tube connecting the valve to a source of vapor supply.

CLAYTON STOVER.