

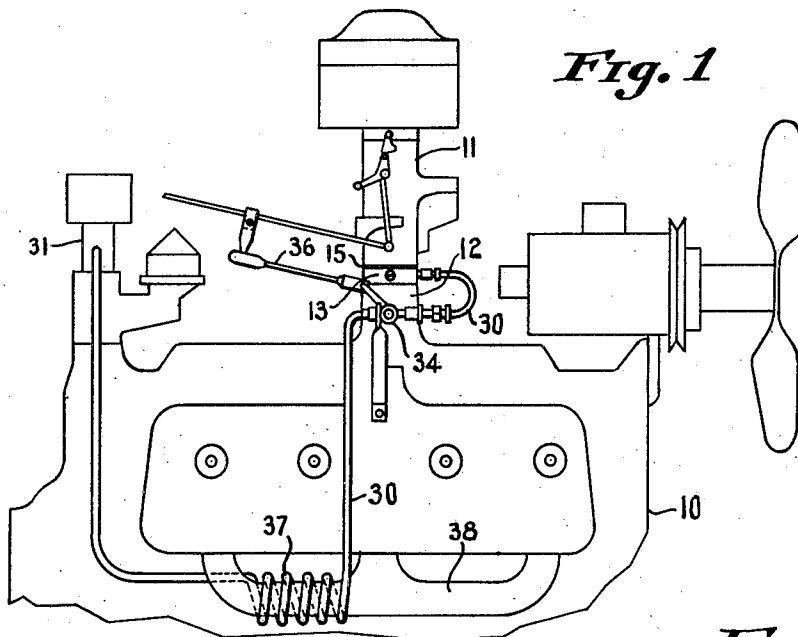
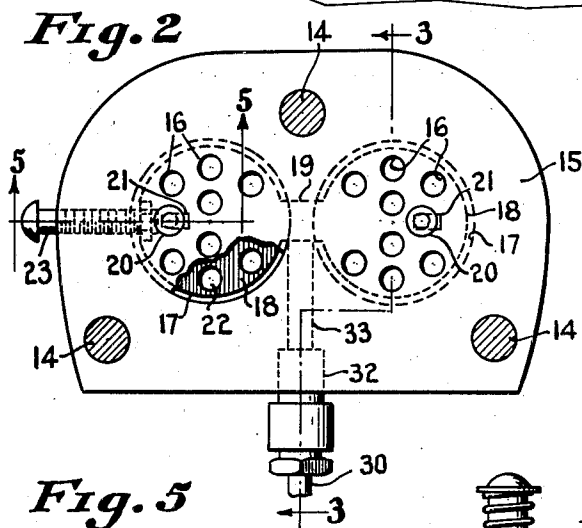
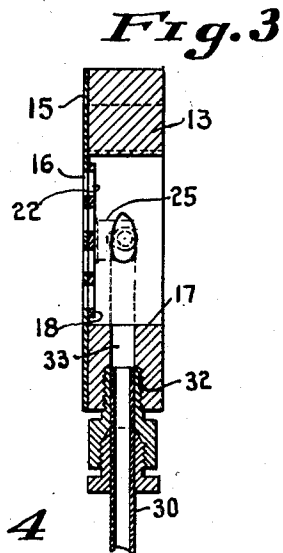
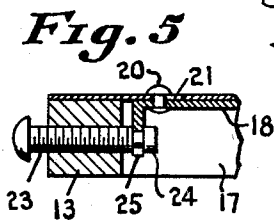
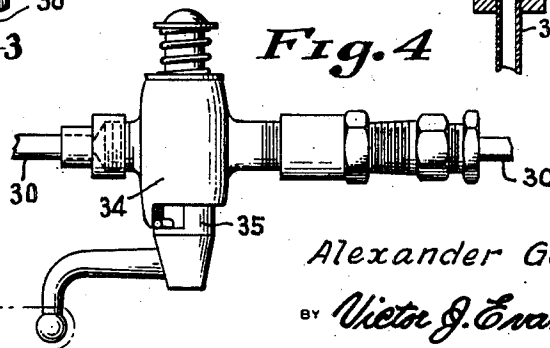
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A. GORLESKI

2,166,720

FUEL MIXING DEVICE

Filed May 24, 1937



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2,166,720

FUEL MIXING DEVICE

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Application May 24, 1937, Serial No. 144,533

2 Claims. (Cl. 48—180)

This invention relates to a device for supplying a fuel mixture to an internal combustion engine.

More particularly, the invention relates to a device for reclaiming fuel ordinarily wasted in an internal combustion engine, and for improving the mixture of vaporous fuel constituents.

The principal object of the invention is the provision of a simple and effectual device for producing an economical and enriched explosive fuel mixture and for delivering the same to an internal combustion engine.

The nature of the invention and its distinguishing features and advantages will appear when the following specification is read in connection with the accompanying drawing, in which:

Fig. 1 is a side view of an internal combustion engine selected to illustrate the device of the present invention applied thereto.

Fig. 2 is a top view of the fuel regulating and improving means.

Fig. 3 is an enlarged section taken approximately on the line 3—3 of Fig. 2 and looking in the direction indicated by the arrows.

Fig. 4 is a view of the control valve and connections; and

Fig. 5 is a detail section taken on the line 5—5 of Fig. 2 and looking in the direction indicated by the arrows.

In the drawing there is shown an internal combustion engine 10 having a down draft carburetor 11 which is connected with a dual intake 12 communicating with two sets of ports of the engine cylinders. In accordance with the invention, a metal body 13 in the form of a gasket is connected in the intake 12, and is held in position by any suitable means such as the bolts 14. A plate 15 is held in fixed position by the bolts 14 in contact with the upper surface of the gasket 13. The plate 15 has two groups of holes 16 therein which register with passages 17 respectively, in the gasket. Discs 18 are joined to each other as at 19 to move in unison, and are disposed beneath the plate 15. Suitable connecting elements 20 carried by the discs 18 enter slots 21 respectively, in the plate 15, whereby the discs 18 have guided movement. Each of the discs 18 has a group of holes 22 to match the holes 16. The discs 18 may thus be moved to various positions of adjustment with respect to the plate 15 and in this manner the holes 22 may be brought into full or partial registration with the holes 16. This is accomplished by means of a screw 23 carried by the gasket 15, the inner end of the screw 23 being swivelly connected as at

24 with a depending lug 25 on one of the discs 18. It will now be understood that the fuel mixture consisting of air and gasoline vapor passes from the carburetor 11 into the intake 12 and thru the holes 16 and 22 causing a turbulence of the mixture according to the adjustment of the discs 18. As a consequence, the fuel mixture leaving the carriage will be effectually agitated, thereby improving the fuel mixture by comminuting the particles.

In accordance with another feature of the invention, means is provided for reclaiming vaporized fuel which passes into the crank case of the engine from the cylinders thereof due to faulty piston rings. The means consist of a conduit 30 having one end thereof in communication with the breather tube 31 and its other end being connected with the gasket 13 as at 32, said end of the conduit 30 being in communication with an outlet port 33 in the gasket which discharges into the passages 17. A control valve 34 of the rotary plug type is connected in the conduit 30. The plug 35 of the valve is connected with the operating connections 36 of the accelerator of the engine. The accelerator thru the intervention of the connections 36 operates the throttle valve of the carburetor 11. It will therefore be understood that when the accelerator is operated, the valve 34 will be opened proportionately thereby admitting various amounts of the reclaimed fuel passing from the crank case into the breather tube 31 and thru the conduit 30 to the passages 17 directly beneath the discs 18. This reclaimed fuel will be comingled with the fuel mixture in its turbulent state, thereby adding to the mixture explosive fuel vapors which would ordinarily be wasted and so achieving an economic advantage.

In accordance with another feature of the invention, the conduit 30 between the breather tube 31 and the valve 34 embodies a coil 37 which surrounds the exhaust manifold 38 of the engine. By reason of the coil 37 the reclaimed fuel will be preheated on its way to the intake, thereby improving the fuel mixture as an explosive agent.

What is claimed as new is:

1. A device of the character described comprising a body member adapted for attachment to an intake manifold, said body member having a central opening therein, a plate carried by said body member and having a plurality of perforations disposed above said central opening, a pair of discs disposed beneath said plate within said central opening, said discs being united for movement in unison and having a series of openings

capable of alignment with the perforations in said plate, means for slidably connecting said discs with said plate, and means carried by said body member having engagement with one of
5 said discs for adjusting said discs relative to said plate.

2. A device of the character described comprising a body member adapted for attachment to an intake manifold, said body member having
10 a central opening therein, a plate carried by said body member and having a plurality of perforations disposed above said central opening, a pair of discs disposed beneath said plate within said central opening, said discs being united for

movement in unison and having a series of openings capable of alignment with the perforations in said plate, means for slidably connecting said discs with said plate, and means for adjusting
said discs relative to said plate, said means including a threaded member disposed in a side
5 wall of said body member and extending beyond the same, one end of said threaded member being disposed in a depending lug formed on one of
said discs whereby transverse movement of said
10 threaded member will actuate said discs to adjust the relation of said alignable openings.

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