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AUTOMATIC WATER REMOVER FOR CARBURETORS

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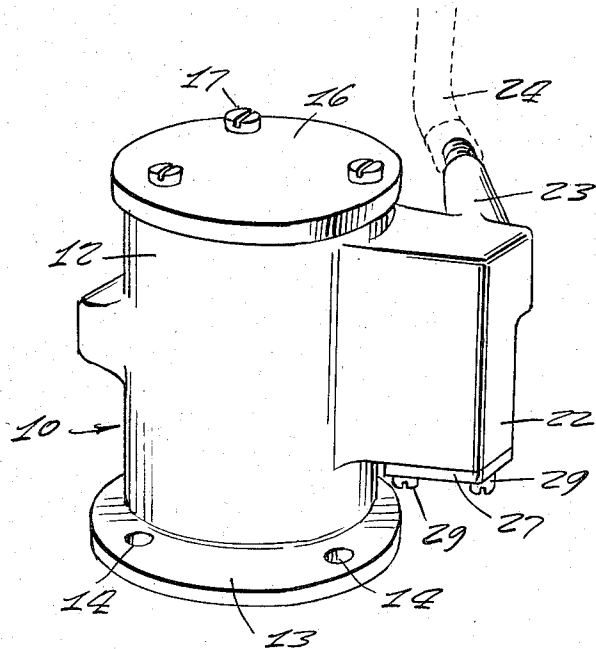


Fig. 1

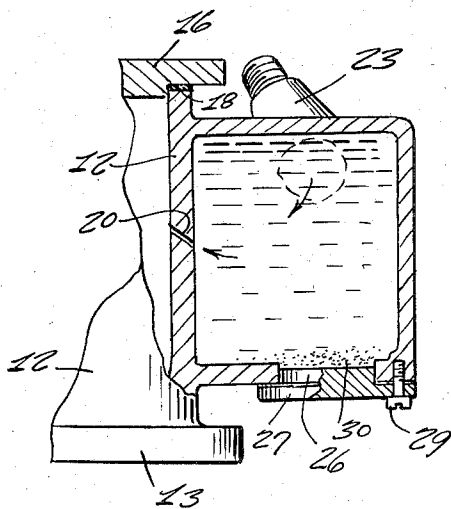


Fig. 2

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AUTOMATIC WATER REMOVER FOR CARBURETORS

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1 Claim. (Cl. 210—513)

This invention relates to fuel supply systems for vehicles and, more particularly, to a filter for removing water and dirt from fuel supplied to a carburetor.

Ordinarily, any water or dirt that is entrained in the fuel supply of an internal combustion engine is collected at the inlet ports of the carburetor, thereby blocking the normal flow of fuel or impeding such flow sufficiently to interrupt the normal supply of the fuel. An object of this invention therefore is to provide a filter that may be used in association with conventional carburetors that is simple in construction, efficient in operation, and which will effectively remove the water and dirt that ordinarily would pass into the inlet ports of the carburetor.

Another object of this invention is to provide a filter device for removing water and dirt from the fuel supply of internal combustion engines that may be readily installed in any vehicle and which may be easily cleaned and maintained in use.

All of the foregoing and still further objects and advantages of this invention will become apparent from a study of the following specification, taken in connection with the accompanying drawing, wherein:

Figure 1 is a perspective view of a filter device made in accordance with the present invention; and

Figure 2 is a fragmentary front elevational view, with parts broken away, of the device shown in Figure 1.

Referring now to the drawing, a filter device made in accordance with the present invention is shown to include a cylindrical housing 10 having a substantially circular side wall 12 that is provided with a securement flange 13 at the lower end thereof for facilitating the attachment of the unit to the intake of a carburetor (not shown), such as by bolts extending through the holes 14 in the flange. The upper end of the housing 10 is adapted to be closed by a removable plate 16 that is secured thereto, such as by machine screws 17. A gasket 18 is used to provide a seal between the housing 10 and the plate 16. As is better shown in Figure 2, a chamber 22 is integrally formed with the housing 10 and includes a portion of the side wall 12 that is common to the housing and the chamber. A port 20, of very small diameter, extends through the adjacent portion of the side wall 12 in an upwardly inclined direction from the chamber 22 to the housing 10. This port is situated intermediate the upper extremity of the chamber that is provided with an inlet 23 of a fuel supply

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line 24 and the lower end thereof which is provided with a clean-out hole 26. A removable cover plate 27 is secured to the opening defining portions of the clean-out hole 26 by means of machine screws 29. It will be recognized, that while a single port 20 is illustrated in the drawing, an additional number of similar ports is contemplated.

In using this apparatus, the housing 10 is secured to the intake of the carburetor and the fuel supply line 24 of the vehicle is secured to the inlet 23 of the chamber. The fuel supply thus fills the interior of the chamber so that a quantity thereof is passed through the port 20 into the main housing 10, from which it is supplied to the carburetor. In view of the size of the port 20 and its position between the upper and lower extremities of the chamber, all water and dirt 30 is collected at the bottom of the chamber, whereby it may be removed by releasing the plate 27 that covers the clean-out hole 26. The particular inclination of the port 20 further enhances this filtering action and discourages the passage of the heavier fluids, such as water, therethrough.

While this invention has been described with particular reference to the specific form shown in the drawing, it is to be understood that such is not to be construed as imparting limitations upon the invention, which is best defined by the claim appended hereto.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

A device for removing foreign solid and liquid matter from the fuel supply of an internal combustion engine having a carburetor with an intake portion, said device including a hollow housing having a securing means at the lower portion thereof adapting it for attachment to the intake of the carburetor and a closure member for closing the upper portion of said housing, a chamber member having a hollow interior chamber integrally secured to the side wall of the housing with a portion of the side wall of said housing and a corresponding portion of the side wall of the chamber member forming a wall section common to both the housing and chamber member, a large inlet port formed upon the upper side portion of the chamber member wholly exteriorly of the outline of the latter member but communicating with the interior thereof through said side portion of said member, the chamber member having a bottom opening for cleaning out sediment, and a removable cover for the bottom opening, and the wall section common to both the housing and chamber member having a small port extending through an intermediate portion thereof in an upwardly inclined direction from the interior of the chamber member into the interior of the housing while being limited exclusively within the opposite sides of said wall section, and forming the sole passage through said wall section.

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