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AIR-FILTER ATTACHMENT FOR MOTOR VEHICLE ENGINES.

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To all whom it may concern:

Be it known that we, GEORGE J. GILMORE and CHARLES A. ROMMEL, citizens of the United States of America, and residents of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Air-Filter Attachments for Motor Vehicle Engines, of which the following is a specification.

This invention relates to that type of filter attachments for the air inlet of motor vehicle engines for separating and holding dust, etc., from such air supply and that afford a supply of clean air to the carbureting apparatus of the engines, and the present improvement has for its object:

To provide a simple and durable structural formation and combination of parts, whereby dust and other solid impurities in the passing air are intercepted and held in an efficient manner and during an extended period of actual use, all as will hereinafter more fully appear.

In the accompanying drawing:

Fig. 1, is a perspective view with parts broken away and showing the preferred arrangement of parts in the present invention.

Fig. 2, is a longitudinal sectional elevation of the same.

Fig. 3, is a horizontal section on line 3—3, Fig. 2.

Like reference numerals indicate like parts in the different views.

As shown in the drawing the closed casing 1 of the appliance is preferably of a rectangular box form provided with a suitable attaching flange 2 for attachment in place, and with a drainage neck 3 in its bottom for the removal of any excess of water from the interior of the casing.

Near its top, the casing 1 is provided with a horizontal partition 4 of wire gauze or like foraminous material dividing the interior of the casing into a smaller upper compartment 5 and a larger lower compartment 6 as shown.

The preferred form of the partition 4 comprises a main portion of foraminous material and a rear portion 4' of imperforate material for the attachment of the outlet duct or pipe 7 hereinafter described.

In the front wall of the casing and communicating with the lower compartment 6 thereof, is formed an inlet opening 8 provided with a shutter 9 of foraminous material adapted to permit a free passage of air and at the same time confine the hereinafter described elastic filling 10 of porous filtering material in place in the lower compartment 6 aforesaid. The lower end of the inlet opening 8 is arranged a distance above the bottom wall of the casing 1 in order to provide a containing chamber for a body of water for maintaining the porous filling 10 in moistened condition in actual use.

The elastic porous filling 10 above referred to, is preferably formed of natural sponge filling the entire cavity of the aforesaid lower compartment 6 and maintaining its position by the natural expansibility of the substance. Any other usual porous material having capillary properties may be used without departing from the scope of this part of the invention.

The outlet pipe or duct 7 above referred to, preferably extends upwardly from the bottom wall of the main casing 1, through and a distance above the partition portion 4' aforesaid, and into the otherwise empty upper compartment 5 of said casing. The lower end of the outlet pipe 7 extends below the bottom wall of the casing 1 for connection with the usual flexible conductor 11 which extends to the carburetor of the motor vehicle engines.

With the present construction, a tortuous passage of the air takes place through the interior of the casing 1 and through the porous filter filling 10 thereof, and which filling by its capillarity is maintained in a moistened condition adapted for effective interception and retention of any dust or other solid matter in the passing air.

Having thus fully described our invention what we claim and desire to secure by Letters Patent is:

1. An air filter for motor vehicle engines, comprising a closed casing having an inlet opening at one side and a distance above the bottom of the casing, a foraminous shutter fitting said inlet opening, a foraminous partition dividing the casing into upper and lower communicating compartments, a filling of elastic porous material in the lower one of said compartments, and an air outlet duct connected to the upper compartment a distance above said dividing partition.

2. An air filter for motor vehicle engines, comprising a closed casing having an inlet opening at one side and a distance above the bottom of the casing, a foraminous shutter fitting said inlet opening, a foraminous partition dividing the casing into upper and lower communicating compartments, a filling of elastic porous material in the lower one of said compartments, and an air outlet duct connected to the upper compartment a distance above said dividing partition.
opening at one side, a foraminous shutter
sitting said inlet opening, a horizontal
foraminous partition dividing the casing in-
to upper and lower compartments, a filling
of elastic porous material in the lower com-
partment, and an outlet duct extending up
through the casing and through said parti-
tion and having communication with the
upper compartment aforesaid at a point a
distance above said partition.

Signed at Chicago, Illinois, this 28th day
of March 1925.

GEORGE J. GILMORE.
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