

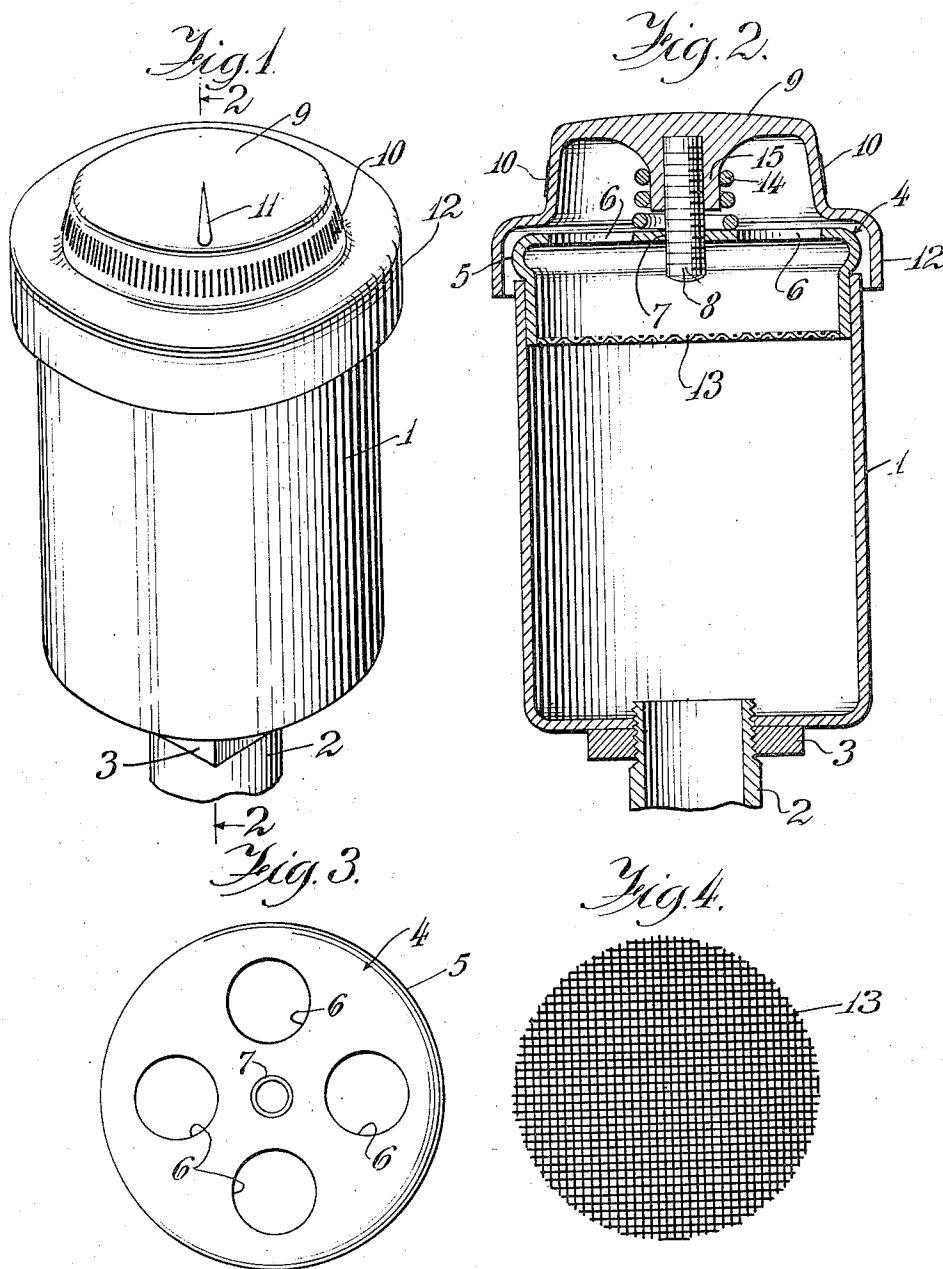
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AIR CLEANER

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AIR CLEANER

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No. 101,185. Divided and this application
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3 Claims. (Cl. 183-74)

The present invention relates to air cleaners and more particularly to a device adapted for cleaning and filtering the air supplied to the mixing chamber of a carburetor. The novel construction comprehends a member provided with means for deflecting and filtering the incoming air and a control valve or member for regulating the quantity of air entering the cleaner and thereby controlling the mixture of fuel and air. By reason of the construction and arrangement of the air intake and tortuous path through which the entering air must pass on its way to the carburetor, the usual intake noises are muffled or silenced. This application is a division of my co-pending application Serial No. 101,185, filed September 17, 1936.

The invention further resides in the construction and arrangement of the parts permitting ready manual adjustment of the air supply. By turning the adjusting member or control valve in one direction, the quantity of air permitted to enter the cleaner and carburetor is reduced and the combustible mixture is consequently choked or enriched. By turning this control valve in the opposite direction, the air supply is increased and the mixture is thinned or made lean. Thus it will be apparent that any desired or required mixture of fuel and air can be secured by adjustment of the control valve.

In the present embodiment, the control valve is in the form of a cover or hood for the air cleaner for shedding or preventing water or other foreign matter from falling into the air intake opening.

Further objects are to provide a construction of maximum simplicity, efficiency, economy and ease of assembly and operation, and such further objects, advantages and capabilities as will later more fully appear and are inherently possessed thereby.

The invention further resides in the construction, combination and arrangement of parts illustrated in the accompanying drawing, and while I have shown therein a preferred embodiment, it is to be understood that the same is susceptible of modification and change, and comprehends other details, arrangements of parts, features and constructions without departing from the spirit of the invention.

In the drawing:

Fig. 1 is a perspective view of the novel air cleaner.

Fig. 2 is a view in vertical cross section taken in a plane represented by the line 2-2 of Fig. 1.

Fig. 3 is a plan view of the intake cap.

Fig. 4 is a plan view of the filter screen.

Referring more particularly to the disclosure in the drawing, the novel air cleaner comprises a cup-shaped member or casing 1 threaded onto and locked upon the neck of a conduit 2 by means of a suitable lock nut 3. The conduit 2 leads to the intake of a carburetor or the like for supplying the combustible mixture to an internal combustion engine. Upon the open end of the casing 1 is mounted an intake cap 4 crimped or enlarged at 5 to seat conformably in the casing and provided with a plurality of spaced openings 6 for passage of the entering air. The central portion of the intake cap is tapped or threaded at 7 to receive the threaded shank 8 of a cover or knob 9 forming an adjustable member for controlling the quantity of air permitted to enter the casing and carburetor.

This control member or knob 9 is preferably knurled at 10 on its gripping portion and provided with an indicating means or pointer 11 so that adjustment may be readily and accurately made. The knob is also formed or provided with an enlargement or overhanging skirt 12 adapted to cover or overlap the air intake cap 4 but sufficiently spaced therefrom and from the exterior of the casing 1 to permit the air to pass therebetween, thence through the openings 6 and filter screen 13 suitably secured or carried in the cap 4, through the conduit 2 and into the mixing chamber of a carburetor, there to be mixed with the fuel to provide a combustible mixture.

In order that the proper adjustment may be maintained, a spring 14 is positioned between the air intake cap 4 and the boss 15 on the underside of the cover or knob 9.

From the above description it will be readily apparent that the invention comprehends a novel construction of air cleaner which will effectively cleanse and filter the incoming air supply, and which supply may be accurately controlled by manual adjustment of a control knob or valve so positioned as to be readily grasped and adjusted by the operator. By turning the knob to the right or clockwise, the quantity of air allowed to enter the cleaner and carburetor is reduced and the mixture is choked or enriched. Adjustment of the knob in a counter-clockwise direction, will increase the air supply.

It will be further apparent that the parts of the cleaner may be readily assembled or removed for cleaning or replacement. The filter screen may be suitably secured or affixed to the lower

edge of the intake cap so as to be removable therewith for cleaning.

Having thus disclosed my invention, I claim:

1. An air cleaner for an internal combustion engine comprising a casing, an adjustable member providing a choke for controlling the quantity of air entering the casing, said member forming a hood for the open end of the casing for shielding the cleaner against the entrance of water or foreign matter and providing an annular restricted inlet for the entering air.
2. An air cleaner for an internal combustion engine, comprising a casing, a member mounted in the open end of the casing, a filtering screen in the member, a cover adjustably mounted on the member and having a part adapted to encompass the periphery of the member and upper end of the casing to provide an annular opening so arranged as to cause the incoming air to pass in a tortuous path and change its direction of travel to thereby remove some of the foreign particles

by deflection and the remainder by passage through the filtering screen, and means for adjusting the cover to decrease or increase the size of the annular opening to vary the amount of entering air.

3. An air cleaner for an internal combustion engine comprising a casing, an intake cap removably seating in the open end thereof, a filter screen carried by the cap, and an adjustable cover for said cap removably attached thereto, said cover having a skirt overhanging the cap and casing but spaced therefrom to provide an annular opening so arranged as to cause the incoming air to pass in a tortuous path and change its direction of travel to thereby remove some of the foreign particles by deflection and the remainder by passage through the filtering screen, said construction also muffling the usual intake noises.

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