

Jan. 23, 1934.

O. R. SKELTON

1,944,279

AIR CLEANER

Filed Feb. 27, 1931

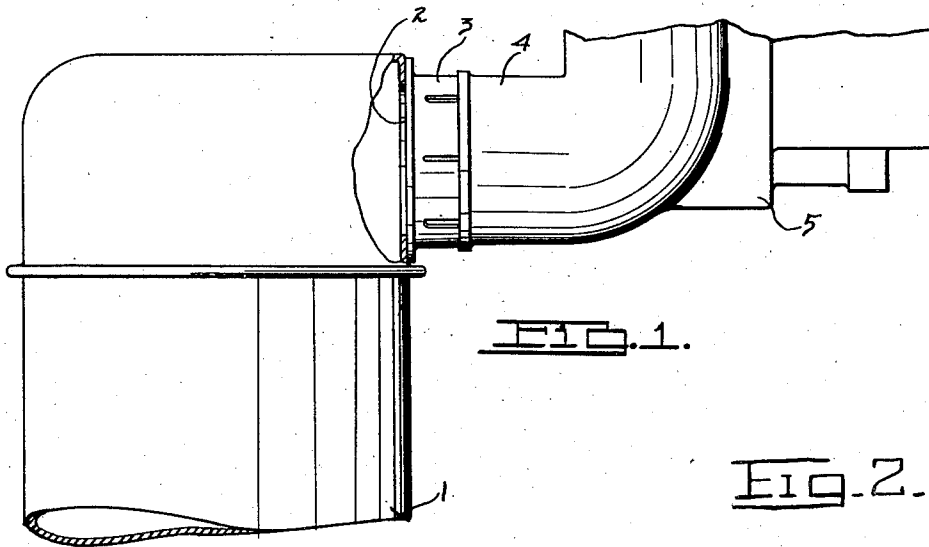


FIG. 2.

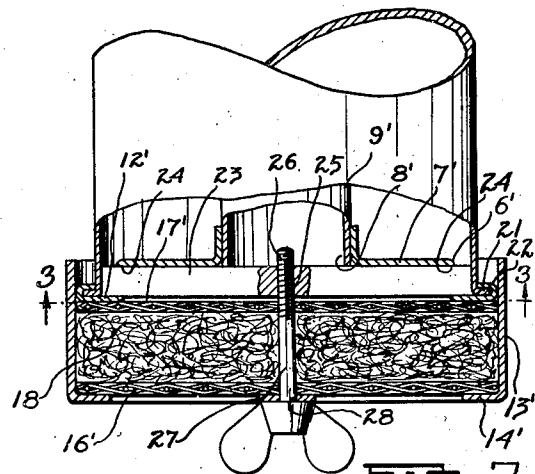
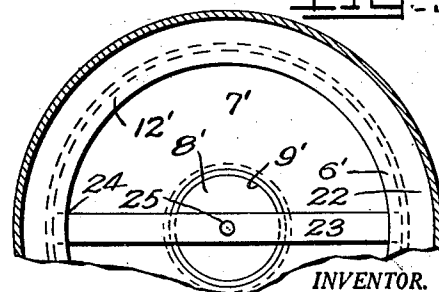


FIG. 3.



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UNITED STATES PATENT OFFICE

1,944,279

AIR CLEANER

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Application February 27, 1931. Serial No. 518,717

2 Claims. (Cl. 183—47)

The main objects of this invention are to provide an improved air cleaner for internal combustion engine carburetors; to provide a detachable dirt collecting unit in a device of this character; to provide a removable dirt collecting medium in a detachable unit of this kind which may be conveniently cleaned or inexpensively replaced; to provide means for holding the dirt collecting medium in a compact condition and under sufficient compression to form tortuous paths for the air as it passes into the devices; and to provide means for releasably securing a detachable dirt collecting unit to an air cleaner which is adapted to vary the compression under which the cleaning medium is held.

An illustrative embodiment of the invention is shown in the accompanying drawing, in which:

Fig. 1 is a fragmentary plan view of an air cleaner which embodies my invention.

Fig. 2 is a fragmentary plan view showing the filter portion of my improved air cleaner in section.

Fig. 3 is a transverse vertical section taken on the line 3—3 of Fig. 2.

In the form shown, my improved air cleaner comprises an outer casing or tubular member 1 which is provided at one side and near one end with an air outlet 2 around which is formed a sleeve 3. The sleeve 3 is engaged on the outer end portion of an inlet air horn 4 of a carburetor 5. The outer casing 1 of the air cleaner is provided at one extremity with a continuous outwardly extending radial flange 21 around which are bent the edge portions 22 of a plate 6' which has an inwardly offset central portion 7'. The offset portion of the plate 6' is provided with an inlet opening 8' in which is received a tubular member 9' that extends centrally of the casing. The tubular member 9' is preferably predetermined in length to modify the sounds produced by the flow of air to the least objectionable pitch. Located between the bent-over edge portions 22 and the inwardly offset portion 7' of the plate 6' is a shoulder or flange 12' which extends inwardly with respect to the casing 1. A bar 23 located at the inlet end of the casing 1 is held against displacement from the latter by its end portions which are received in slots 24 in that portion of the member 6' which is located between the central offset part 7' and the flange 12' thereof. The bar 23 has a central threaded aperture 25 for receiving a threaded stem 26 which is an integral part of a thumb bolt 27.

Slidably mounted on the casing 1' is a detachable dirt collecting unit which includes an outer cylindrical member 13' having an inwardly extending radial flange 14' on its outer extremity. The cylindrical member 13' is substantially cup-shaped and it is provided on its outer end with a transverse bar 27 having an aperture 28 at its

center for receiving the threaded stem 26. A pair of spaced screens 16' and 17' are located in the cup-shaped member 12' and separated by a mass of cleaning or filtering material 18' such as steel wool. The cleaning unit is detachably secured to the casing 1' by the stem 26 and thumb bolt 27 which may be adjusted to produce a desired degree of compactness in the filtering medium.

In the above forms of my invention, the cleaning unit may be conveniently disconnected from the casing so as to permit washing or other rejuvenation of cleaning material which, if desired, may be removed bodily from the unit and replaced without much cost.

Although but one specific embodiment of this invention has herein been shown and described, it will be understood that various changes in the size, shape and arrangement of parts may be made without departing from the spirit of my invention and it is not my intention to limit its scope other than by the terms of the appended claims.

What I claim is:

1. An air cleaner including a tubular casing having an air inlet at one end and an air outlet, an inwardly extending flange on said casing surrounding said air inlet, a tubular member concentric with said casing having an inwardly extending flange on its outer end, a pair of pervious elements, one seated against each of said flanges, a mass of dirt collecting material between said elements, and adjustable means on said casing for detachably holding said tubular member thereon and adapted to vary the compactness of said dirt collecting material.

2. An air cleaner including a tubular casing having an air inlet at one end and an air outlet, an inwardly extending flange on said casing surrounding said air inlet, a tubular member concentric with said casing having an inwardly extending flange on its outer end, a pair of pervious elements, one seated against each of said flanges, a mass of dirt collecting material between said elements, elements in said casing and tubular member respectively having registering apertures therein, and a bolt extending through one of said apertures and threaded in the other for detachably holding said tubular member on said casing and adapted to vary the compactness of said dirt collecting material.

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