Nov. 25, 1924.

E. L. RAY

1,516,548

AUTOMOBILE VACUUM CLEANER

Filed Sept. 5, 1922

Fig. 1

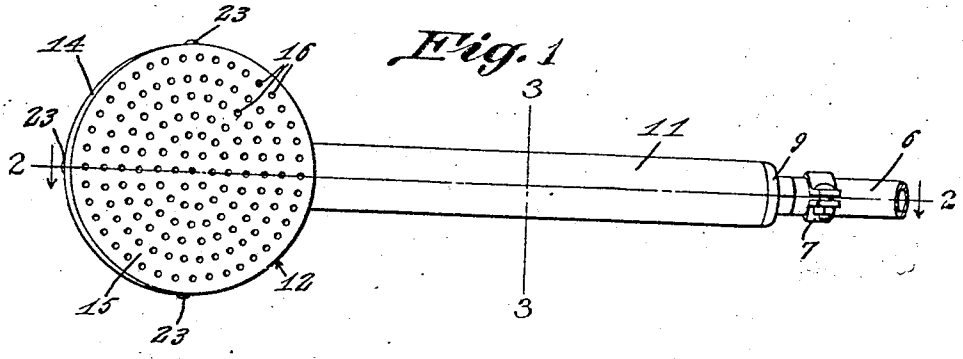


Fig. 2

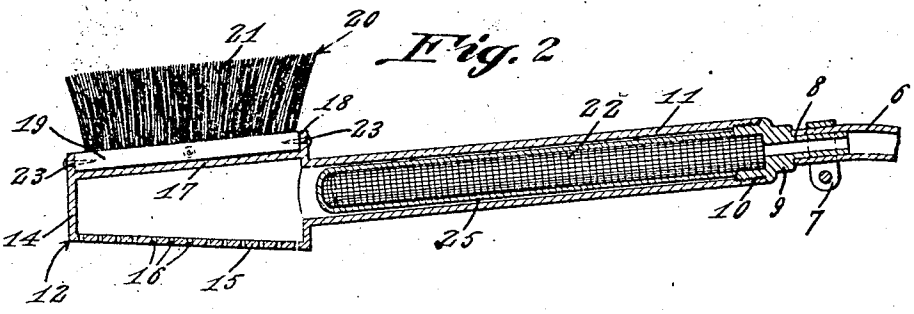


Fig. 3

Fig. 4.

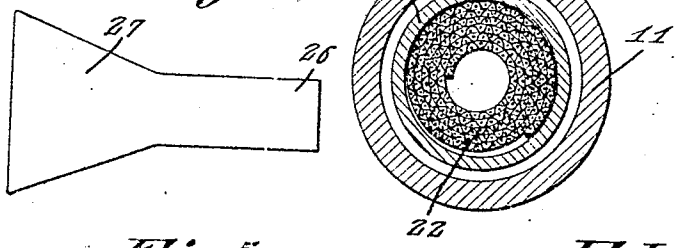
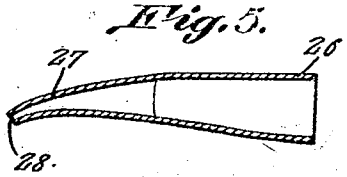


Fig. 5.



E. L. Ray, Inventor

By C. A. Snow & Co.

Attorney

Patented Nov. 25, 1924. 1,516,548

UNITED STATES PATENT OFFICE.

EDWARD LINDEN RAY, OF HEDRICK, IOWA, ASSIGNOR OF ONE-HALF TO CHARLES BOUGHAN, OF HEDRICK, IOWA.

AUTOMOBILE VACUUM CLEANER.

Application filed September 5, 1922. Serial No. 586,244.

To all whom it may concern:

Be it known that I, EDWARD L. RAY, a citizen of the United States, residing at Hedrick, in the county of Keokuk and State of Iowa, have invented new and useful Automobile Vacuum Cleaners, of which the following is a specification.

This invention aims to provide a simple head whereby the suction in the intake manifold of an internal combustion engine may be made available for cleaning any parts of motor propelled vehicles.

In the accompanying drawings:—

Figure 1 is a plan of the suction member; Figure 2 is a section on the line 2—2 of Figure 1; Figure 3 is a section on the line 3—3 of Figure 1. Figure 4 is a plan showing a modified form of suction head; and Figure 5 is a longitudinal section of the head shown in Fig. 4.

In Figure 1, the numeral 6 marks a suction conduit. The conduit 6 is connected at 7 to the neck 8 of a foot piece 9 mounted at 10 to the tubular stem 11 of a suction member 12 comprising a drum-like head 14 having an outer wall 15 provided with perforations 16 and including an imperforate inner wall 17 bounded by a marginal flange 18 within which is received a back 19 of a brush 20, the body of the brush being marked by the numeral 21 and being made of bristles or any other suitable material, securing elements 23 passing through the flange 18 and engaging the back 19 of the brush 20 to hold the brush in place. The numeral 22 marks a stiffener mounted in the foot piece 9 and located within the stem 11 of the suction member 12, in spaced relation thereto, as shown in Figure 3 of the drawings. The stiffener 22 preferably is made of wire netting, wound in a plurality of convolutions, as shown in Figure 3. About the stiffener is placed a porous covering 25 which may be made of a chamois or any other suitable material. The stiffener 22 is so constructed that it will not collapse and cut off the suction, when suction is created in the conduit 6 and in the tubular stem 11 of the member 12 as hereinafter described.

In practical operation, when suction is created in the suction conduit 6 suction will be transmitted to the head 14 of the suction member 12 and the dirt may be drawn from the cushions, the top or any other part of the vehicle, through the perforations 16, the air traversing the stem 11 and passing through the porous covering 25. The air passes through the stiffener 22 and through the conduit 6 and, thus, a thorough cleaning of any part of the vehicle may be effected, the dirt accumulating in the stem 11. The foot piece 9 together with the stiffener 22 and the porous covering 25 may be removed from the end of the stem 11, whereupon the dirt may be removed from the stem or handle. If desired, the body 21 of the brush 20 may be used to loosen dirt, so that the same may be sucked into the head 14 through the perforations 16.

If desired recourse may be had to the suction head shown in Figures 4 and 5. The suction member alluded to comprises a tubular neck 26 adapted to be assembled with the conduit 6 and including a flattened portion 27 having an elongated restricted mouth 28. It is obvious that suction will be created in the member shown in Figures 4 and 5, as in the specific suction member delineated in Figures 1 and 2.

What is claimed is:—

In a device of the class described, a suction member, a bag-like porous dust-filter in the suction member, and a stiffener in the porous filter, the stiffener being made of foraminous material wound into spiral form to fashion convolutions which are in direct contact with each other, the stiffener conforming closely to the cross section of the filter, the spiral form of the stiffener permitting it to be made by cutting the constituent material of the stiffener to the desired length and rolling it.

In testimony that I claim foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

EDWARD LINDEN RAY.

Witnesses:
P. W. HENINGER,
W. W. YOUNG.