Aug. 26, 1924. 1,506,684

E. B. STAPLES

DUST COLLECTOR FOR AUTOMOBILES

Filed May 24, 1923

Fig. 1.

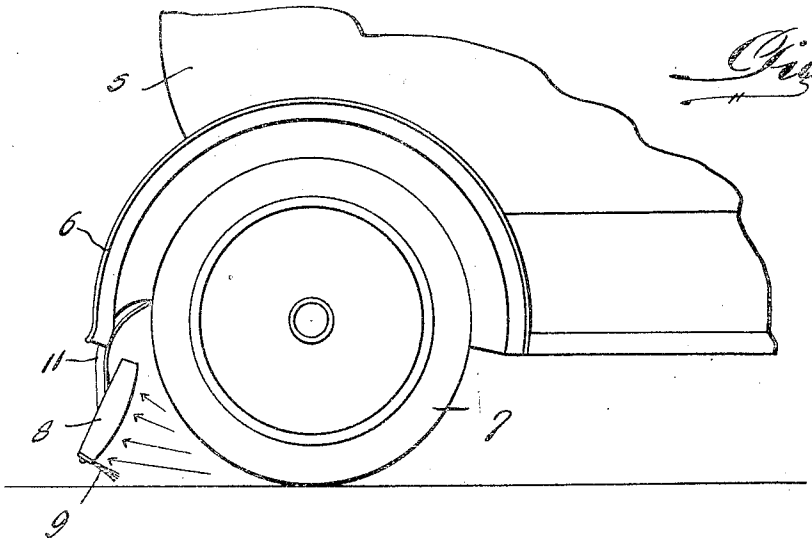


Fig. 2.

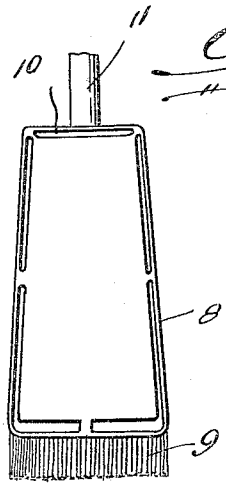
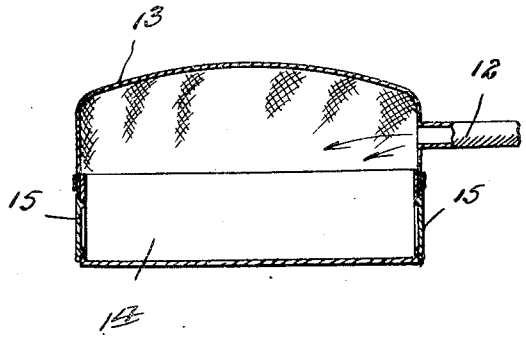


Fig. 3.



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UNITED STATES PATENT OFFICE.

EUGENE B. STAPLES, OF EUREKA SPRINGS, ARKANSAS.

DUST COLLECTOR FOR AUTOMOBILES.

Application filed May 24, 1923. Serial No. 641,030.

To all whom it may concern:

Be it known that I, EUGENE B. STAPLES, a citizen of the United States, residing at Eureka Springs, in the county of Carroll and State of Arkansas, have invented certain new and useful Improvements in Dust Collectors for Automobiles, of which the following is a specification.

In carrying out the present invention it is my purpose to provide a dust collector primarily adapted for use in conjunction with automobiles wherein the usual dust occasioned incident to the travel of the vehicle over the road is overcome.

The primary object of the invention is the provision of a dust collector that comprises a suction box suitably supported rearwardly of each of the vehicle wheels, these suction boxes being in communication with a suitable form of suction fan whereby as the dust is thrown up by the movement of the wheels over the ground the same is effectively caught into the boxes and conveyed into a suitable receptacle.

A still further object of the invention is the provision of a device that is not only highly useful and practical but one that may be manufactured, installed and operated at minimum cost.

The nature and advantages of the invention will be better understood when the following detailed description is read in connection with the accompanying drawings, the invention residing in the construction, combination and arrangement of parts as claimed.

In the drawings forming part of this application, like numerals of reference indicate similar parts in the several views, and wherein:—

Figure 1 is a fragmentary side elevation of a vehicle equipped with my improved dust collector.

Figure 2 is a front elevation of one of the suction boxes comprised in the invention, and

Figure 3 is a cross-section of a dust receiving receptacle that constitutes a part of the invention.

Briefly described the invention contemplates the provision of a suction box disposed rearwardly of each of the vehicle wheels. These suction boxes being in communication with a suitable form of suction fan that is adapted to draw the dust into the boxes and then discharge the same into a suitable form of receptacle. I do not wish to be protected on any certain form of suction fan, as in the future practice of the invention any desirable form of suction fan may be employed as the means for operating the device. My invention is limited entirely to the specific form of suction box that is adapted for support rearwardly of each of the wheels and to the dust collecting receptacle that is in communication with the different suction boxes and these are the elements that have been detailed in the drawing.

The suction boxes that are supported rearwardly of each of the wheels are of identical construction and a showing and description of one will suffice for all.

In the drawing, 5 designates the body of a vehicle, 6 one of the wheel fenders and 7 one of the wheels. In the present instance, 8 designates a suction box of suitable shape and supported in any desirable manner rearwardly of the wheel 7. This suction box is preferably disposed at an angle with respect to the vertical axis of the wheel 7 and carries a brush 9 at its lower end that extends at right angles to the box for purposes hereinafter described.

The front wall of the box 8 is provided at its marginal edges with relatively elongated slots 10 and in communication with the interior of the box through the medium of a pipe 11 is a suitable form of suction fan that is operated preferably from the vehicle engine and is not shown.

In communication with the suction fan through the medium of a hose or pipe connection 12 is a fabric cover 13, a metallic receptacle 14 that is supported at a desirable point beneath the body of the vehicle. The opposite ends of the receptacle 14 are formed with outlets 15 whereby the dust within the receptacle may be removed, it being understood in this connection that the cover 13 of the receptacle is not impervious to air but is of such nature as to allow the same to pass therethrough and at the same time prevent the passage of the dust.

In view of the above description it will at once be apparent that when the vehicle is equipped with the dust collector as per the present invention the different suction boxes 8 constituting the same will effectively receive the dust which normally assumes the

path of travel in the direction of the arrows, Figure 1 as the machine is being moved, it being understood from this figure that the front end of the brush 9 is positioned slightly above the road surface and serves as a means for preventing the passage of dust from between the lower end of the suction box and the road surface.

From the foregoing description, taken in connection with the accompanying drawing, the advantages of construction and the mode of operation of the invention will be readily apparent to those skilled in the art, and while I have described the principles of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and that such changes may be made when desired as are within the scope of the appended claim.

Having described my invention, what I claim and desire to secure by Letters-Patent, is:—

A dust collector adapted to be applied to a vehicle comprising a box having converging opposite sides, means for supporting the box in an inclined position, the box being provided at its under face and in the vicinity of its side and end walls with elongated slots, a suction pipe penetrating the upper side of the box, and bristles carried at the lower end of the box and being downwardly and forwardly inclined below the lower slot in the under face of the box.

In testimony whereof I affix my signature.

EUGENE B. STAPLES.