June 12, 1956 L. C. GEORGE 2,749,830

VENTILATOR ATTACHMENT FOR AUTOMOBILES

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Fig. 1

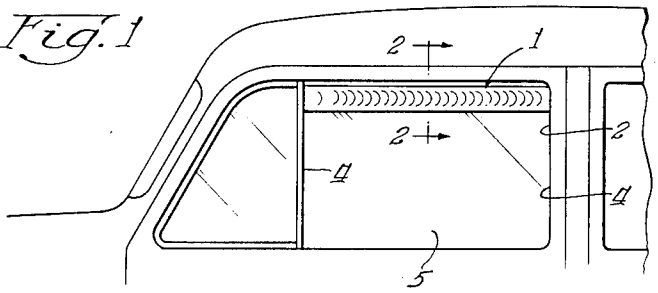


Fig. 2

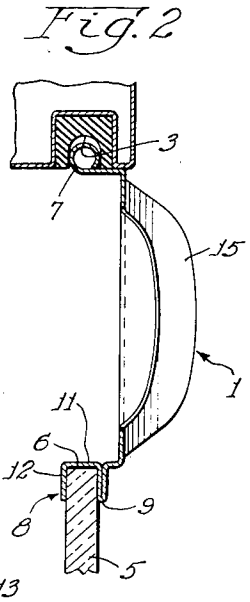
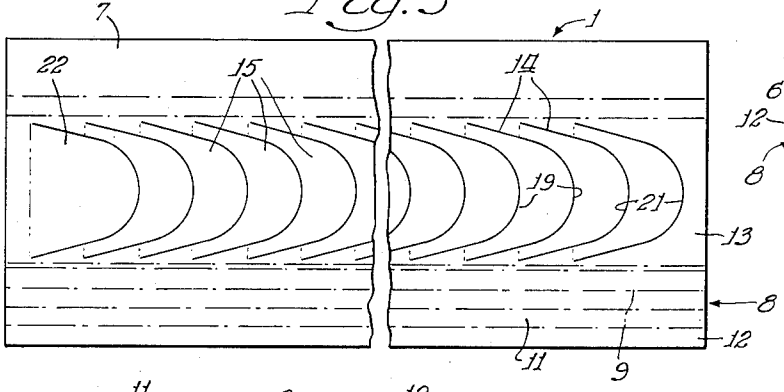


Fig. 3



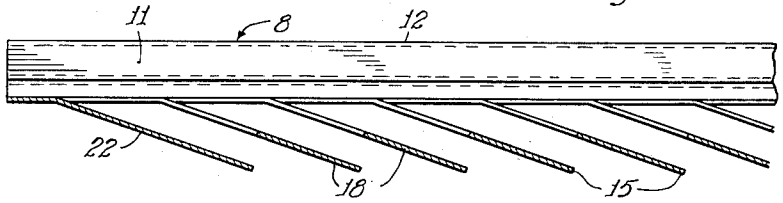
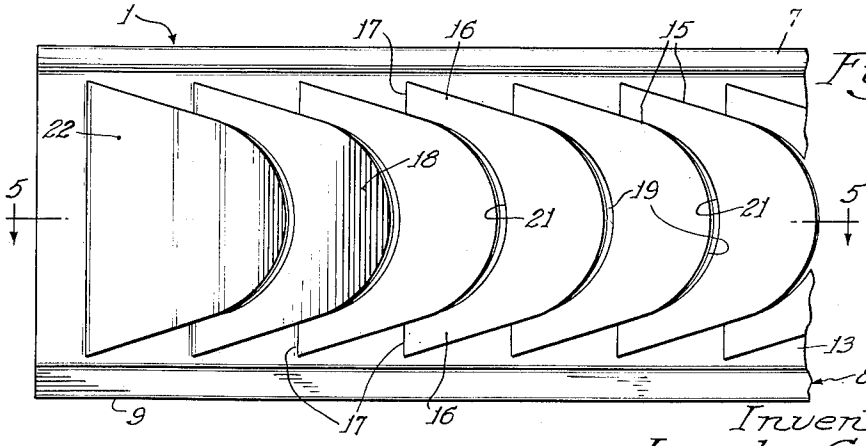


Fig. 5

Fig. 4



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VENTILATOR ATTACHMENT FOR AUTOMOBILES

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5 Claims. (Cl. 98—2)

The invention relates generally to a ventilator structure, and more particularly to a ventilator attachment for automobiles and the like.

The invention has among its objects the production of a ventilator structure adapted to be positioned in the window opening of a vehicle door or the like, which ventilator is exceedingly simple in construction, pleasing in appearance and very efficient for the purposes intended.

Another object of the invention is the production of such a ventilator which may be constructed from a single piece of material, and is provided with a plurality of deflector louvers that are so designed that a relatively large air flow may be effected through the device, at the same time preventing undesired drafts, etc., in the vehicle.

A further object of the invention is the production of such a ventilator structure in which the louvers thereof are so designed that the device may be readily fabricated from sheet metal and the like, as well as plastic and other suitable materials.

Many other objects and advantages of the construction herein shown and described will be obvious to those skilled in the art from the disclosure herein given.

To this end my invention consists in the novel construction, arrangement and combination of parts herein shown and described, and more particularly pointed out in the claims.

In the drawing, wherein like reference characters indicate like or corresponding parts:

Fig. 1 is a side elevational view of a portion of a vehicle door having a ventilator constructed in accordance with the present invention mounted therein;

Fig. 2 is a sectional view taken approximately on the line 2—2 of Fig. 1;

Fig. 3 is a plan development of a partially formed metal blank from which the ventilator may be constructed;

Fig. 4 is an enlarged fragmentary view of the forward end portion of a ventilator constructed in accordance with the present invention; and

Fig. 5 is a sectional view taken approximately on the line 5—5 of Fig. 4.

In the past there have been numerous ventilator structures adapted to be employed in a vehicle door opening, such ventilators, however, normally employing one or more comparatively large openings through which air may pass, or a series of small louvered openings of the type formed by cutting the material in a straight line and deforming the material at one side of the cutout of the plane of the body of the material, the louvers thus formed being suitably spaced along the structure.

The present invention contemplates a ventilator construction wherein the louvers are so shaped that an effective air passageway is formed along substantially the entire length of the structure, in effect providing a passageway of large area for the flow of air provided with a series of vanes or deflectors.

Referring to the drawings, the reference numeral 1 indicates generally a ventilator structure adapted to be positioned in a window opening 2 in a vehicle door or other member, the latter having a groove or channel 3 in the top wall defining the window opening, which groove extends along the side members 4, and in which is slidably mounted a glass closure 5, the latter being movable vertically by suitable operating mechanism whereby the ventilator may be positioned between the top of the window opening and the upper edge 6 of the glass closure 5. As illustrated in Fig. 3, the ventilator may be constructed from a suitable rectangular piece of sheet metal to form a body structure, the upper edge of which is suitably formed to provide a tubular bead or flange 7 of a size to be received in and engaged with the groove 3. In the embodiment illustrated, the lower edge of the ventilator is provided with a channel member 8 of a size to receive the upper edge of the glass closure 5, the member 8 being formed by reversely folding the material comprising the ventilator as indicated at 9, the material then bent inwardly at right angles to form an inwardly extending top portion 11 terminating in a downwardly extending flange or side wall 12.

The intermediate portion 13 of the ventilator extending between the members 7 and 8 is provided with a plurality of generally U-shaped cuts 14 which are longitudinally spaced along the body structure, with adjacent cuts defining generally U-shaped deflectors or louvers 15 therebetween. As illustrated in Figs. 2, 4, and 5, each louver 15 comprises a pair of leg portions 16 connected at their inner ends 17 to the ventilator body structure and connected at their outer ends by an intermediate portion 18. Each of the louvers 15 are bent outwardly at the juncture 17 of their inner ends with the body structure, whereby the respective louvers lie in parallel planes which are inclined outwardly and rearwardly with respect to the body structure as indicated in Figs. 2, 4, and 5. It will be noted that the intermediate portions 18 of each louver have curved outer edges 19 and similarly curved inner edges 21, with the outer edge 19 of each louver being complemental to the inner edge 21 of the next succeeding louver, the U-shape of the louvers forming a relatively large opening in the body structure through which air may pass, with the intermediate portions 18 of the louvers in effect forming longitudinally arranged air deflectors or vanes which are spaced outwardly from the plane of the body structure. Thus a large effective area is provided for the passage of air, with the louvers 15 being operative to prevent undesired drafts, etc., through the ventilator structure.

Referring to Fig. 3, it will be noted that the leading or first cut 14 in the body structure forms a front or forward louver or deflector which is bent outwardly, along a line connecting the ends of the particular cut, into a plane extending parallel to the planes of the louvers 15, so that the front or forward louver 22 is in effect of solid construction and connected throughout its transverse width to the body structure. The louvers 15 and 22 effectively protect the air passage formed in the ventilator and prevent a direct flow of air through the ventilator structure at right angles to the plane of the body structure, at the same time in effect concealing the ventilator opening when the structure is viewed from the side as illustrated in Fig. 1 and presenting a very novel and attractive appearance.

It will be particularly noted that the construction of the louvers is such that the device may be readily constructed from sheet material as illustrated, or may readily be molded from plastic or other similar material, the shape of the louvers being such that molding may be employed with a comparatively simple die structure.

It will also be apparent that the present construction in effect utilizes an air passageway of comparatively large

area which is provided with a series of deflector louvers as distinguished from prior devices which utilize a plurality of comparatively small openings through which the air may pass.

It will be apparent from the above description that I have provided a novel ventilator structure which although exceedingly simple in construction is very efficient for the purposes intended and presents a pleasing and ornamental appearance.

Having thus described my invention, it is obvious that various immaterial modifications may be made in the same without departing from the spirit of my invention; hence, I do not wish to be understood as limiting myself to the exact form, construction, arrangement and combination of parts herein shown and described, or uses mentioned.

What I claim as new and desire to secure by Letters Patent is:

1. In a ventilator structure adapted to be positioned in a window opening of a member provided with channel grooves along the top and sides of the opening, and a glass closure slidable in the grooves, the combination of an elongated body structure having an opening therein and substantially parallel longitudinal edge portions, means on the lower edge portion for engaging the top edge portion of such a closure member, means on the upper edge portion for engaging such a top channel groove, whereby the body structure may be operatively supported by said means, a plurality of generally U-shaped louvers which are similarly positioned across said opening and extending outwardly and rearwardly with respect to the above structure, said louvers having oppositely disposed leg portions integrally connected at corresponding ends to the body structure and at the opposite ends by respective intermediate portions, the outer edges of the respective intermediate portions being substantially complementary to the inner edges of the intermediate portion of the next succeeding louver, and a front louver having an outer edge of substantially the same shape as the outer edges of the succeeding louvers and connected throughout its transverse width to the body structure.

2. In a ventilator structure adapted to be positioned in a window opening of a member provided with channel grooves along the top and sides of the opening, and a glass closure slidable in the grooves, the combination of an elongated body structure having an opening therein and substantially parallel longitudinal edge portions, a channel member associated with the lower edge portion adapted to receive and engage the top edge portion of such a closure member, a tubular member associated with the upper edge portion adapted to enter and engage such a top channel groove, whereby the body structure may be operatively supported thereby, a plurality of generally U-shaped louvers which are positioned across said opening in substantially parallel planes outwardly and rearwardly with respect to the body structure, said louvers having oppositely disposed leg portions integrally connected at their inner ends to the body structure and at their outer ends by respective intermediate portions, the outer edges of each respective intermediate portion being curved and substantially complementary to the inner edge of the intermediate portion of the next succeeding louver, and a front louver having an outer edge of substantially the same shape as the outer edges of the succeeding louvers and connected throughout its transverse width to the body structure.

3. In a ventilator structure adapted to be positioned in a window opening of a member provided with channel grooves along the top and sides of the opening, and a glass closure slidable in the grooves, the combination of an elongated body structure having an opening therein and formed from a rectangular sheet metal blank having substantially parallel longitudinal edge portions, the lower edge portion being bent to form an inverted channel member adapted to receive and engage the top edge portion of such a closure member, the upper edge portion being bent to form a tubular member adapted to enter and engage such a top channel groove, whereby the body structure may be operatively supported by said means, a plurality of generally U-shaped louvers which are positioned across said opening in substantially parallel planes extending outwardly and rearwardly with respect to the body structure, said louvers formed from said body structure by cutting the latter along longitudinally spaced U-shaped lines to form oppositely disposed leg portions integrally connected at their inner ends to the body structure and at their outer ends by respective intermediate portions, the outer edges of the respective intermediate portions being substantially complementary to the inner edges of the intermediate portion of the next succeeding louver, and a front louver having an outer edge of substantially the same shape as the outer edges of the succeeding louvers and connected throughout its transverse width to the body structure.

4. In a ventilator structure, the combination of an elongated body structure having an opening therein and substantially parallel longitudinal edge portions, a plurality of generally U-shaped louvers which are positioned across said opening in substantially parallel planes extending outwardly and rearwardly with respect to the body structure, said louvers having oppositely disposed leg portions integrally connected at their inner ends to the body structure and at their outer ends by respective intermediate portions, the outer edges of the respective intermediate portions being substantially complementary to the inner edges of the intermediate portion of the next succeeding louver, and a front louver having an outer edge of substantially the same shape as the outer edges of the succeeding louvers and connected throughout its transverse width to the body structure.

5. In a ventilator structure, the combination of an elongated body structure having a relatively large longitudinally extending opening therethrough and a plurality of generally U-shaped deflector louvers extending transversely with respect to the longitudinal axis of the body structure and outwardly from the plane of the latter, means operatively connecting said deflector louvers to the body structure adjacent the edge portions of the latter, and a front louver connected throughout its transverse width to the body structure, and overlying the adjacent end portion of said opening substantially from the connection of such louver to the next adjacent louver.

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