Oct. 27, 1925. 1,558,533

B. O. CONE

RADIATOR SCREEN FOR AUTOMOBILES

Filed April 24, 1925

Fig. 1.

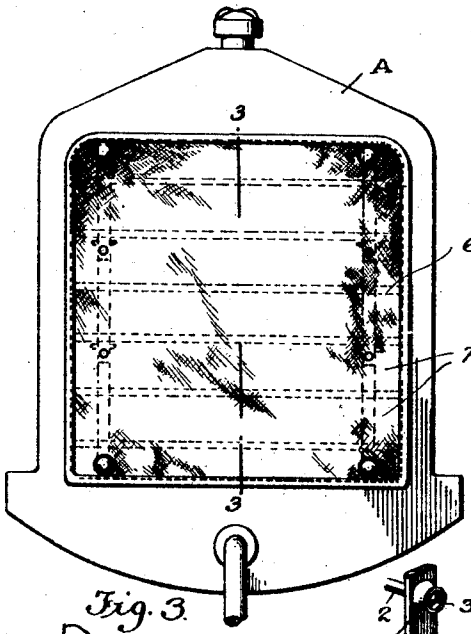


Fig. 2.

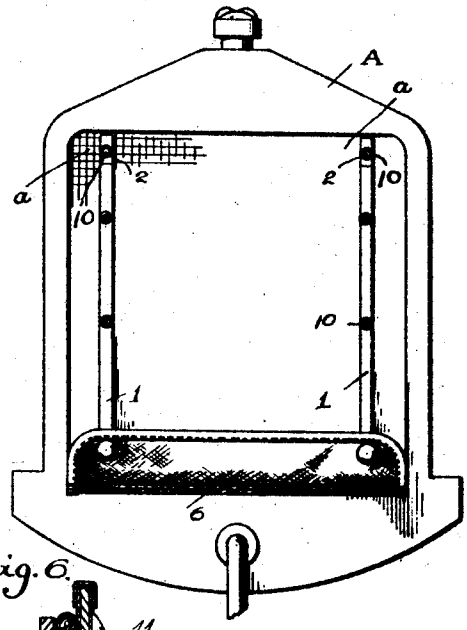


Fig. 3.

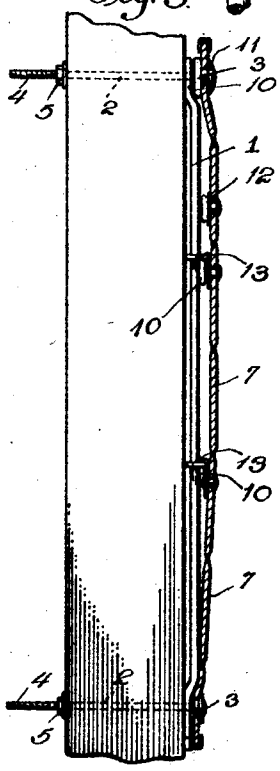


Fig. 4.

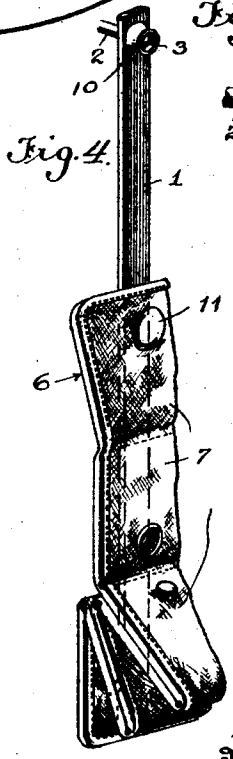


Fig. 6.

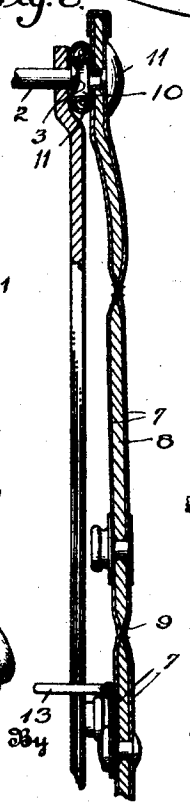
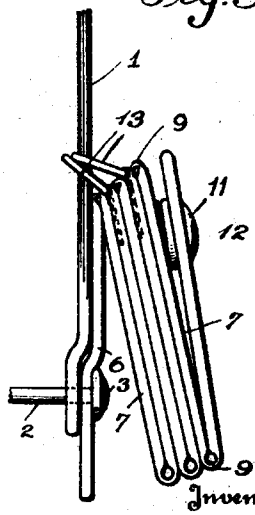


Fig. 5



Inventor

Burtis O. Cone

By O'Neill & Burr

Attorneys

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UNITED STATES PATENT OFFICE.

BURTIS O. CONE, OF RICHMOND, VIRGINIA, ASSIGNOR TO CRAWFORD MANUFACTURING CO., INC., OF RICHMOND, VIRGINIA, A CORPORATION OF VIRGINIA.

RADIATOR SCREEN FOR AUTOMOBILES.

Application filed April 24, 1925. Serial No. 25,526.

To all whom it may concern:

Be it known that I, BURTIS O. CONE, a citizen of the United States, and resident of Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Radiator Screens for Automobiles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to attachments to the radiators of motor vehicles, and more particularly to means adapted for adjustment to vary the amount of air allowed to pass through the front of the radiators.

The principal object of the invention is the production of a novel form of curtain or shield adapted for quick attachment to the front of any automobile radiator, and which may be easily adjusted to increase or reduce the circulation of air therethrough.

Another object of the invention is the production of a novel device of the character described, which will be economical and efficient, and which will present a neat appearance in all positions of adjustment.

These and other objects of the invention will be more fully set forth and described in the following specification, when read in connection with the drawings forming a part thereof.

In said drawings:

Fig. 1 is a plan view of the front of an automobile radiator equipped with my improved structure, and showing the shield supporting bars in dotted lines.

Fig. 2 is a similar view illustrating the shield in a different position of adjustment.

Fig. 3 is a fragmentary section taken on the line 3—3 of Fig. 1.

Fig. 4 is a detailed perspective view of one of the supporting guide bars,

Fig. 5 is an enlarged side elevation of the folded shield, showing a portion of one of the guide-bars, and

Fig. 6 is an enlarged view, partly in vertical section, showing a portion of one of the guide bars and of the slat sections detachably connected thereto.

Now referring specifically to the drawings, A indicates the radiator of any automobile, which radiator may be provided with the usual cells *a*, and 1, 1, represent bars which are here shown as secured to the top and bottom of a radiator of the honeycomb type, by means of bolts 2 each of which extends through the cells of the honeycomb, and is provided with a head 3 at the outer end, and a screw-threaded portion 4 at the inner end, a nut 5 being mounted on the end 4, and adapted to be turned thereupon to engage the inner face of the honeycomb, whereby to firmly retain the bars 1 in position. The construction contemplates the provision of a bar 1 at each side of the radiator, as clearly shown in Fig. 2, and, at each end, the bars 1 are offset from the radiator as shown in Fig. 3. If desired the upper and lower ends of the bars may be connected directly to the portion of the radiator above and below the honeycomb, by means of screws or bolts, or otherwise.

The screen or curtain 6 is made up of a plurality of foldable slat sections 7. As shown in Fig. 4, each section 7 comprises a double layer of flexible material, having a stiffening rib 8 positioned between the two layers of material above and below the rib 8, the two layers of material are stitched together at 9, thereby forming a flexible joint permitting the respective slats 7 to freely swing one upon the other in order to assume the overlapping position clearly shown in Fig. 5.

At the top the bars 1, are provided on the outer face with a snap-fastener 10 of any desired type, similar fasteners being carried throughout the length of the bar, said fasteners being adapted for co-operative engagement with complementary fasteners 11, carried by the inner face of the top of the screen 6. The next to the top slat 7, of the screen 6, is also provided, along its inner face, and on each side with a fastener 12, adapted to co-operatively engage the fastener 11 carried by the top slat 7 of the screen.

Eyelets 13 are pivotally secured to the inner faces of at least two of the slats 7, each of said eyelets being adapted to encircle one of the bars 1 and guide the screen in its vertical movements.

In applying the screen to the radiator the bolts 2 are inserted through the proper cells *a* at the top, and the nuts 5 then applied and turned up against the rear of the honeycomb structure to securely retain the bolt in position. The eyelets 13 of the screen are

then pushed upwardly over the lower end of the bars 1, and the fasteners 11 at the top of the screen, are snapped into engagement with the fastener 10 carried by the outer end of the bolt 2.

The lower rods 2 are then inserted through appropriately placed apertures in the bottom portion of the screen and secured in fixed position by turning the nuts 5, as before explained. The screen 6 is now in position to completely close the radiator front. When it is desired to permit the passage of some air through the radiator, the fasteners 11 are disengaged from the fasteners 10, and the two weakened joints 9, thereby causing the fastener 11, on the top slat 7, to be brought into position to co-operatively engage the fastener 12 carried by the slat 7 below, as indicated in Fig. 5.

A second stage of adjustment of the screen 6, to allow more air to circulate through the radiator, may be effected by lowering the screen still further and engaging the fastener 11 with a lower fastener 10 carried by the bars 1, as will be understood the eyelets 13 sliding on the bars and at all times retaining the screen 6 in proper alignment with respect to the radiator.

When it is desired to fully open the radiator the eyelets 13 are allowed to slide downwardly to the extreme lower limit, and the fastener 11 on the top slat 7 fastened to the fastener 12 on the next adjacent slat, all the slats being then grouped as shown in Figs. 2 and 5.

Obviously the number of fasteners 10 on the bars 1, may be varied at will, dependent upon the different positions of adjustment desired

From the foregoing it will be clear that I have provided a structure wherein any desired vertical adjustment of the screen 6 may be effected. The eyelets 13 at all times prevent the screen from bulging away from the bars 1, thereby maintaining the neat appearance of the former when in operative position and also holding the slats 7 in close proximity to the bars and preventing the ingress of air past the bulged portions which would be present at the sides of the slats, were it not for the provision of the eyelets 13.

It is also to be noted that the fasteners 11 on the top slat 7 of the screen 6 are adapted for connection to the fasteners 10 carried by the bars 1, or to the fastener 12 carried by the inner face of the adjacent slat 7. On account of this provision of fasteners the top slat may always rest upon and be connected to the next adjacent slat, as shown in Figs. 2 and 5, thereby insuring a neat appearance in all positions of adjustment of the screen 6.

Modifications of the structure herein depicted may be suggested to those skilled in the art, but my invention covers all embodiments falling fairly within the scope of the appended claims.

What I claim is:

1. A screen for closing the air opening of motor vehicle radiators, comprising a plurality of hingedly connected slats, guide-bars secured to the front of the radiator, fastener elements carried by said bars, eyelets carried by said slats and slidable on said bars, and snap fasteners carried by the top slat and adapted for co-operative engagement with the fasteners carried by said bars.

2. A screen for closing the air opening of motor vehicle radiators, comprising a plurality of hingedly connected slats, guide-bars secured to the front of the radiator, fastener elements carried by said bars, eyelets pivotally carried by said slats and slidable on said bars, and snap fasteners carried by the top slat and adapted for co-operative engagement with the fasteners carried by said bars.

3. A screen for closing the air opening of motor vehicle radiators, comprising a plurality of hingedly connected slats, vertically extending guide-bars secured to the front of the radiator, a plurality of fastener elements carried by said bars, snap fasteners carried by the top slat and adapted for co-operative engagement with the fastener elements carried by said bars, fastener elements carried by the second slat and adapted for co-operative engagement with the fasteners carried by said first mentioned slat, and means pivotally secured to said slats and limiting movement of the latter laterally of said bars.

4. A screen for closing the air opening of motor vehicle radiators, comprising a plurality of hingedly connected slats, vertically extending guide-bars secured to the front of the radiator, a plurality of fastener elements carried by said bars, snap fasteners carried by the top slat and adapted for co-operative engagement with the fastener elements carried by said bars, fastener elements carried by the second slat and adapted for co-operative engagement with the fasteners carried by said first mentioned slat, and means pivotally secured to said slats and limiting movement of the latter laterally of said bars, said means comprising eyelets carried by the slats and surrounding said bars.

In testimony whereof I affix my signature.

BURTIS O. CONE.