G. G. MARSHALL.

AIR CONTROLLING DEVICE FOR AUTOMOBILE RADIATORS.

APPLICATION FILED DEC. 26, 1918.

1,379,308. Patented May 24, 1921.

Fig. 1.

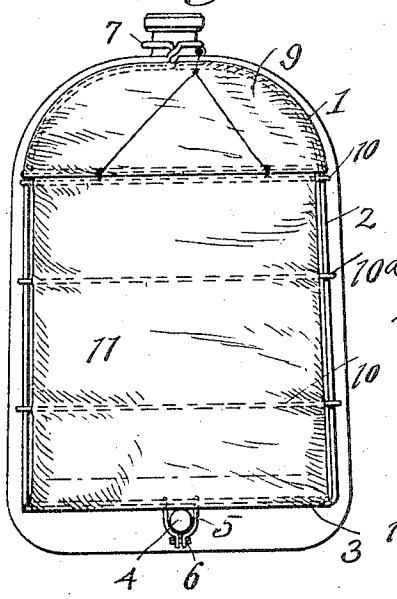


Fig. 2.

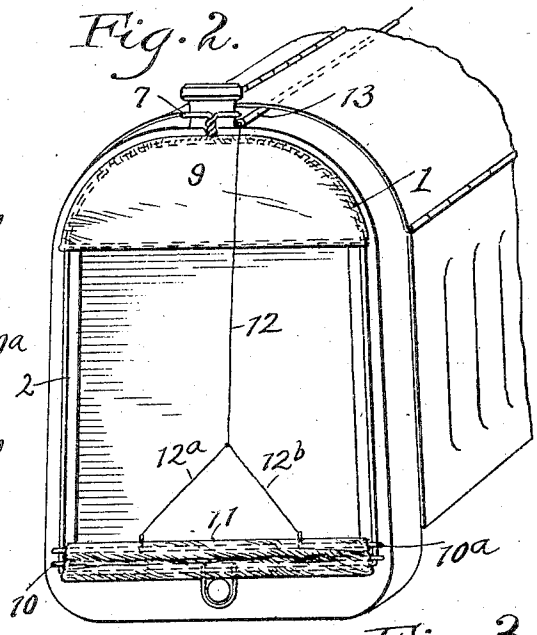


Fig. 3

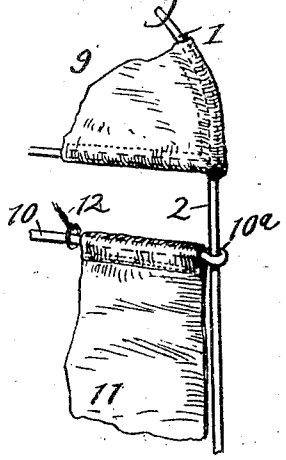
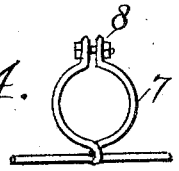


Fig. 4.



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UNITED STATES PATENT OFFICE.

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AIR-CONTROLLING DEVICE FOR AUTOMOBILE-RADIATORS.

1,379,308. Specification of Letters Patent. Patented May 24, 1921.

Application filed December 26, 1918. Serial No. 268,378.

To all whom it may concern:

Be it known that I, GEORGE G. MARSHALL, a citizen of the United States, residing at Cleveland Heights, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Air-Controlling Devices for Automobile-Radiators, of which the following is a full, clear, and exact description.

This invention relates to a device adapted for use in connection with the radiator of an automobile for the purpose of controlling the amount of air which may pass through the radiator for the purpose of cooling the water circulating within the radiator.

An object of the invention is to provide a device of the character described which may be attached and detached from the radiator, and the operation of which may be controlled by the driver from his seat in the vehicle.

A further object is to provide a device which operates on the principle of collapsing the screen or chute by which the passage of air is excluded and as will be obvious from the drawing and the succeeding description, the device may be so operated as to uncover more or less of the radiator to permit the passage of air.

A further object of the invention is to provide a device of the character described which is of simple construction and may be manufactured at low cost.

Generally speaking, the invention may be said to comprise the elements and combinations thereof set forth in the accompanying claims.

Reference should be had to the accompanying drawings forming a part of this specification, in which Figure 1 is a front elevation of a radiator having a device of this invention secured thereto; Fig. 2 is a perspective view showing one form of the device in its collapsed position; Fig. 3 is a fragmentary perspective view on an enlarged scale showing more in detail portions of construction; Fig. 4 is a top plan view showing the manner of attachment of one form of the device to the filling neck of a radiator.

Referring to the drawings, and more particularly to Figs. 1 to 4 thereof, I provide a wire frame. This frame 1 has a top portion on which is bent in general to conform with the top line of the radiator, side members 2 which are substantially straight, and a bottom member 3. In making up the frame this frame is usually made of one continuous piece of wire. At the lower portion the frame is secured to the housing 4, which usually contains the end of the crank shaft. For this purpose part of the frame is provided with a loop, as indicated at 5, the ends of the loop being fastened together in any desired manner, as indicated at 6. The top part of the frame is provided with a loop, indicated at 7, this loop encircling the filling neck of the radiator, and the ends of the loop may be secured together in any desired manner, as indicated at 8 in Fig. 4. The top portion of the frame 1 has secured thereto a piece of canvas or other similar material such as indicated at 9 in Fig. 1.

Extending transversely between the side members of the frame are rods 10. In the drawing, I have shown three such rods, but more than three may be employed if such is desired. These rods at their ends are provided with eyes 10^a as indicated more particularly in Fig. 3 these eyes encircling the side members 2 of the frame, and from the construction it will be seen that the bars 10 may slide with respect to the sides of the frame. A sheet 11 of canvas or other material is at its lower ends secured to the bottom of the frame, and to the top bar 10, and the intermediate bars 10 are also secured to the canvas at substantially equal distances from each other and from the top bar 10, and the lower bar 3 of the frame. The top bar 10 has secured thereto a suitable raising and lowering device which in the present instance is a cord 12 which is secured to cords 12^a and 12^b which in turn are secured to the top bar A at two points thereof, so that in the raising of the bar 10 an equal pull is applied at more than one point, thereby eliminating twisting of the bar 10. The cord 12 extends to the dash of the vehicle in connection with which the device is used, so as to be in convenient position to be operated by the driver of the car. Obviously, the cord 12 may extend upon the outside of the radiator, but preferably I provide a tubular member 13 which extends beneath the hood so that the cord may extend through the tube rather than upon the outside of the radiator. This makes a more sightly construction.

The operation of the device will be apparent. When the cord 12 is loosened the

weight of the canvas sheet and the cross rods 10 cause the canvas sheet to collapse and expose the face of the radiator. Obviously the canvas sheet may be lowered so as to expose to any desired degree the face of the radiator.

Having described my invention, I claim:—

1. In a device of the character described, the combination with a frame of a collapsible member secured to said frame at the lower portion thereof, cross members extending between the side members of the frame and slidably mounted upon said side members of the frame, the said cross members being secured to the collapsible member, the collapsible member leaving the frame entirely open when at the bottom thereof and covering portions of said frame in intermediate positions between the bottom and the top, and means secured to the collapsible member for raising and lowering the collapsible member.

2. In a device of the character described, the combination with a frame of a flexible sheet comprehended within the sides of the frame said sheet at its lower end being secured to the bottom of the frame, guiding means associated with the sheet and with the side members of the frame, the flexible sheet leaving the frame entirely open when at the bottom thereof and covering portions of said frame in intermediate positions between the bottom and the top, and means for raising and lowering said sheet.

3. In a device of the character described, the combination with a frame, means forming a closure for the upper part of the frame, a flexible sheet comprehended within the frame, the lower end of said sheet being secured to the lower end of the frame, guiding members associated with the flexible sheet and slidably mounted upon the side members of the frame, the flexible sheet leaving the frame entirely open when at the bottom thereof and covering portions of said frame in intermediate positions between the bottom and the top, and means for raising and lowering said sheet.

In testimony whereof I hereunto affix my signature.

GEORGE G. MARSHALL.