Sept. 9, 1930. G. KALENOFF 1,775,560

AIR CUT-OFF FOR AUTOMOBILE RADIATORS

Filed April 13, 1929

Fig. 1.

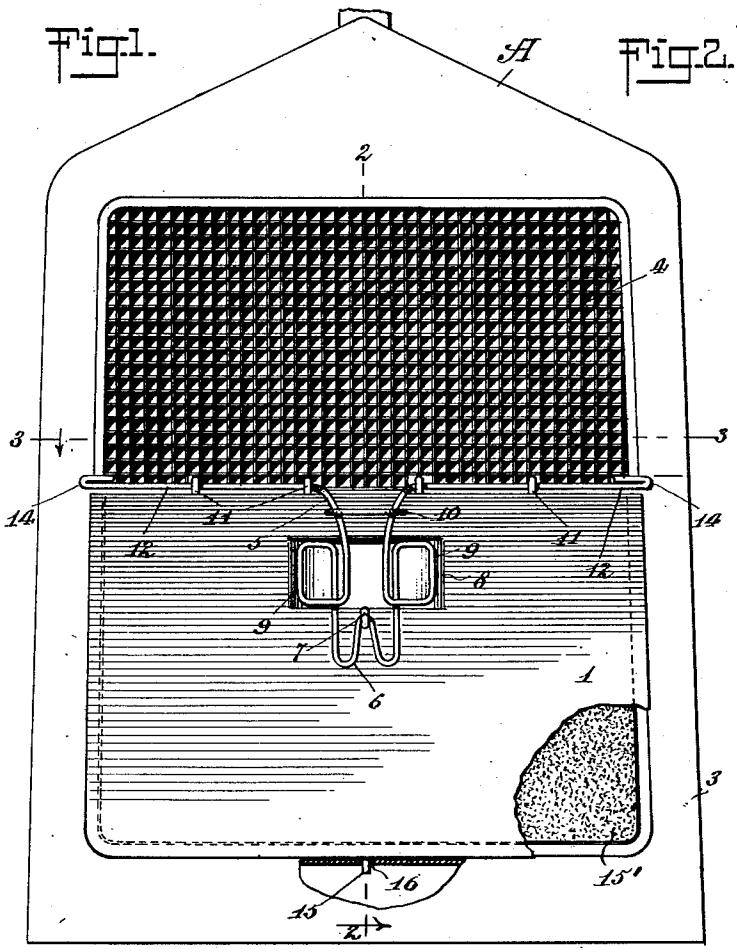


Fig. 2.

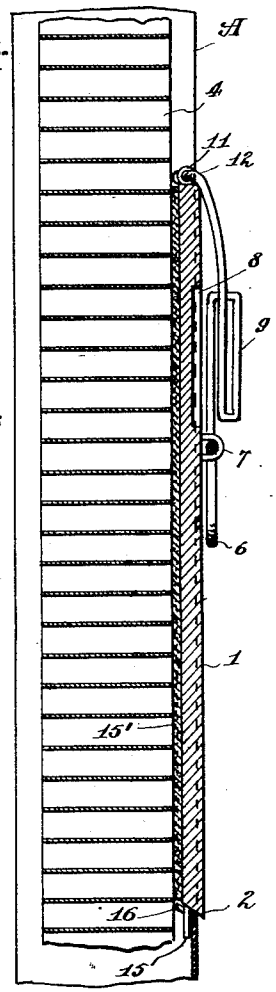


Fig. 3.

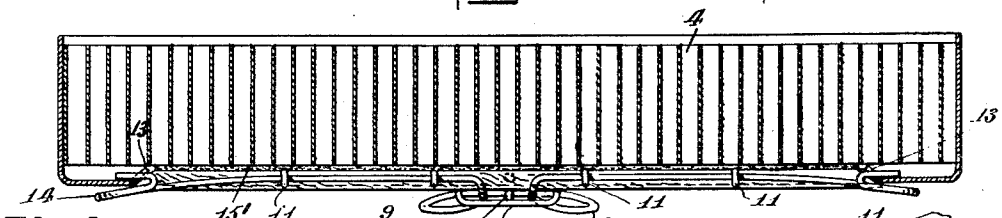


Fig. 4.

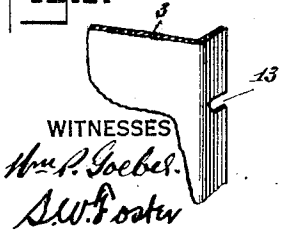


Fig. 5.

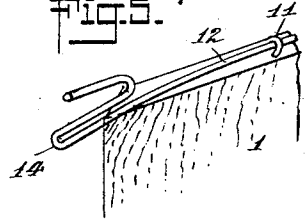
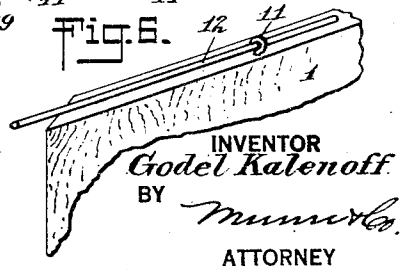


Fig. 6.



WITNESSES

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UNITED STATES PATENT OFFICE

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AIR CUT-OFF FOR AUTOMOBILE RADIATORS

Application filed April 13, 1929. Serial No. 354,856.

This invention relates to air cut-offs for automobile radiators.

An object of the invention is to provide a simple, inexpensive device which may be readily attached to the front and preferably the lower portion of a radiator so as to cut off the circulation of air through a portion of the radiator.

It is a well known fact that radiators for internal combustion engines as employed on automobiles require less circulation of air in cold weather than in warm weather, and, in fact, if a too great circulation is permitted in cold weather there is a tendency to freeze the water in the radiator.

Drivers of automobiles knowing this fact utilize pieces of cardboard or other material to cut off the circulation through a portion of the radiator. Such devices disfigure the car and it is difficult to properly maintain them in place.

It is the broad idea of my invention to provide a cut-off device which can be manufactured and sold at a reasonably low price, which can be conveniently manipulated with one hand if desired to secure the same in place or remove the device from the radiator, and which will be most efficient in cutting off the air without in any way injuring or disfiguring the radiator.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts, which will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings—

Figure 1 is a view in front elevation of an automobile radiator, showing my improved device in operative position; portions of the view are in section to illustrate the construction;

Figure 2 is an exaggerated view in vertical section on the line 2—2 of Figure 1;

Figure 3 is a view in horizontal section on the line 3—3 of Figure 1;

Figure 4 is a fragmentary sectional detail of one inner edge of the radiator;

Figure 5 is a fragmentary perspective view of one corner of the cut-off device showing one form of attaching finger;

Figure 6 is a view similar to Figure 5, showing a modification.

1 represents what I shall hereinafter call a plate although it is to be distinctly understood that this plate 1 may be of wood, metal, cardboard or any other material which is suitable for the purpose, and it may be of such weight and thickness as desired. Of course the device may be made of various materials, some cheaper than others, so that the device may be furnished to the market at a cost within the reach of every one.

I shall illustrate the device as shown in the drawing with the understanding of course that I do not wish to be limited to specific details of construction. Assuming that the plate 1 is of wood, it is made of suitable thickness and is preferably formed with beveled or tapering edges 2 so as to neatly fit within the casing 3 of an automobile radiator A.

This casing 3 of the radiator A is provided with any suitable form of openwork 4 so that air can pass through the same to cool the water in the radiator. My improved plate 1 is designed primarily to fit and close the lower portion of the radiator so as to prevent circulation of air through a portion of the radiator, and of course the device may be made as large or as small as desired.

While it is the common practice to locate the device at the lower portion of the radiator it may be located anywhere desired.

My invention has particularly to do with the means for holding the device in operative position against the radiator and this means comprises a single piece of spring wire 5 bent substantially as follows: The wire midway between its ends is given a general compound curvature, as indicated at 6, and is secured to the plate 1 by a staple 7 or any other suitable means.

The plate 1 above the point of attachment or staple 7 is preferably formed with a recess 8, and the ends of the wire extend upwardly and are bent, forming finger receiving loops 9, 9, disposed above or partially in the recess 8 so as to provide accommodation for the thumb and finger of one hand in the re-

spective loops 9 to draw the ends of the wire towards each other in manipulating the securing means.

The ends of the wire from the loops 9 extend upwardly and through a relatively wide loop 10, which limits the outward swinging movement of the wire. The ends of the wire then extend in opposite directions and preferably along the upper edge of the plate 1, constituting locking bolts 12, 12 which are guided in staples or eyes or any other suitable devices 11 secured to the upper edge of the plate 1.

The extremities of these locking bolts are adapted to engage in notches or perforations 13 in the inner edges of the casing 3 and said bolts may be straight, as indicated in Figure 6, or they may have at their extremities a series of return bends providing an overlapping portion 14 which lies over the outer surface or face of the radiator casing, as indicated in Figures 1, 3 and 5 of the drawings.

The plate 1 may also have at its lower edge a pin 15 which projects through a notch or opening 16 in the lower portion of the radiator so that when this pin and the bolts are in place the device is securely held. I may also provide a felt or other sheet facing 15′ on the inner face of the plate to prevent scratching of the radiator and more effectually exclude the air.

With my improved device it is simply necessary for the operator to insert the fingers through one of the loops 9 and the thumb through the other loop 9 and grip the securing device so that he can withdraw the bolts 12 and remove or replace the device by the operation of one hand.

While I have illustrated the radiator as being provided with notches or openings to receive the bolts 12 and pin 15 it is to be distinctly understood that in many types of radiator it is not necessary to provide notches or openings as the bolts and pin can be all connected back of a flange on the radiator, and I may dispense altogether with the pin 15, if desired, in the plate.

Various changes and alterations might be made in the general form of the parts described without departing from my invention and hence I do not limit myself to the precise details set forth but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

I claim:

1. An air cut-off device of the character described, comprising a plate of suitable material, and a securing device composed of spring wire secured at its intermediate portion to the plate and at its ends constituting bolts for engagement with a radiator, the portion of said wire adjacent the point of attachment being bent forming finger and thumb receiving loops to constitute a handhold to support the latter and manipulate the bolts.

2. An air cut-off device of the character described, comprising a plate of suitable material, and a securing device composed of spring wire secured at its intermediate portion to the plate and at its ends constituting bolts for engagement with a radiator, the portion of said wire adjacent the point of attachment bent forming finger and thumb receiving loops to constitute a handhold to support the latter and manipulate the bolts, said plate having a recess therein back of the loops.

3. An air cut-off device of the character described, comprising a plate of suitable material, and a securing device composed of spring wire secured at its intermediate portion to the plate and at its ends constituting bolts for engagement with a radiator, the portion of said wire adjacent the point of attachment bent forming finger and thumb receiving loops to constitute a handhold to support the latter and manipulate the bolts, said bolts adjacent their extremities having return bends whereby projections are provided engaging the inner and outer walls of the radiator casing.

4. An air cut-off device of the character described, comprising a plate of suitable material, a securing device composed of spring wire secured at its intermediate portion to the plate and at its ends constituting bolts for engagement with a radiator, the portion of said wire adjacent the point of attachment bent forming finger and thumb receiving loops to constitute a handhold to support the latter and manipulate the bolts, and a pin on the lower edge of the plate adapted to operatively engage the lower portion of the radiator.

Signed at New York, in the county of New York and State of New York, this 12th day of April, A. D. 1929.

GODEL KALENOFF.