W. C. FARRELL.

SHIELD OR PROTECTOR FOR RADIATORS.

APPLICATION FILED MAR. 6, 1915.

1,254,785.

Patented Jan. 29, 1918.

Fig. 1.

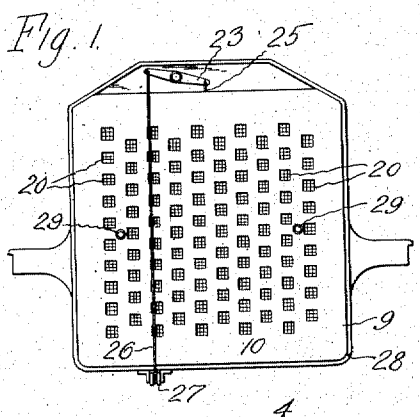


Fig. 2.

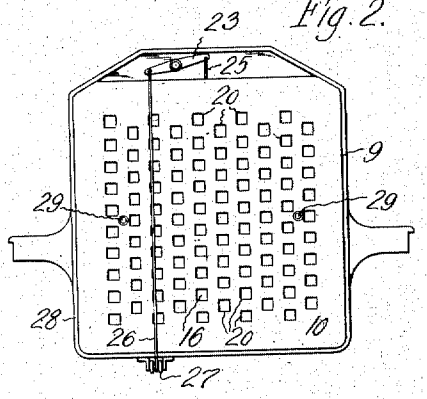


Fig. 3

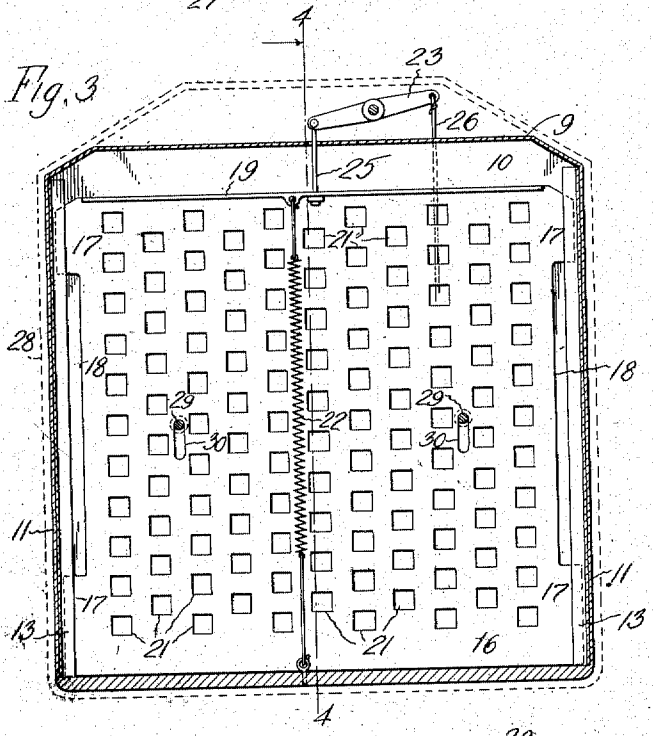


Fig. 4

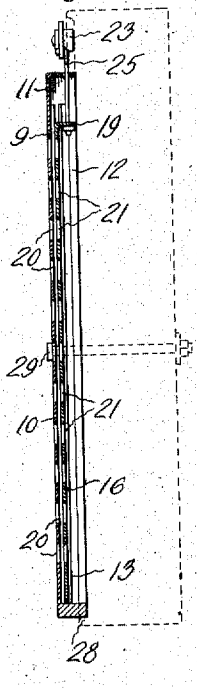


Fig. 5.

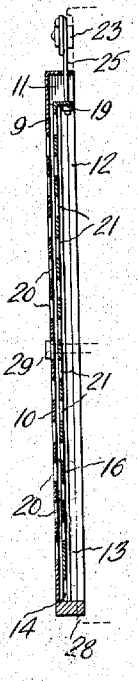
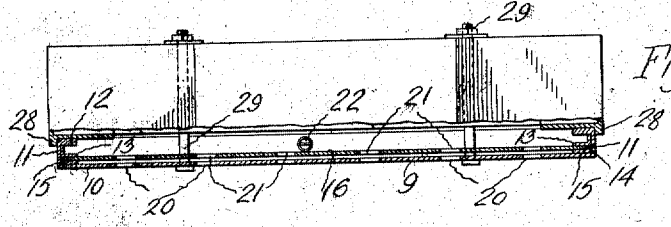


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

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SHIELD OR PROTECTOR FOR RADIATORS.

1,254,785. Specification of Letters Patent. Patented Jan. 29, 1918.

Application filed March 6, 1915. Serial No. 12,528.

To all whom it may concern:

Be it known that I, WALTER C. FARRELL, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Shields or Protectors for Radiators, of which the following is a specification.

This invention relates to shields or protectors for the radiators of automobiles. Such protectors are used for the radiators of water cooled automobile engines during cold weather for the purpose of preventing the water in the radiator from freezing when the engine is not running, and for regulating the admission of air to the radiator so as not to chill the water enough to deleteriously affect the operation of the engine.

The object of the invention is to provide a practical and desirable device of this character of strong and simple construction, which can be readily attached to the radiator of an ordinary automobile and which can be so operated, from the driver's seat of the machine if desired, as to cut off, either partially or entirely, the supply of air admitted to the radiator.

In the accompanying drawings:

Figure 1 is a front elevation of an automobile radiator of standard type having fitted thereon a protector embodying the invention, the protector being opened so as to admit air to the radiator.

Fig. 2 is a similar view, showing the protector entirely closed.

Fig. 3 is a rear sectional elevation of the protector, on an enlarged scale, showing the radiator by dotted lines.

Fig. 4 is a section on line 4—4, Fig. 3, looking in the direction of the arrow.

Fig. 5 is a similar view, showing the protector closed.

Fig. 6 is a sectional plan view of the protector attached to the radiator.

The protector or shield is made of sheet metal or of any other suitable material and consists primarily of an outer or stationary and an inner or movable plate or section, each section containing openings or air inlet ports which are adapted to register when it is desired to admit air to the radiator, and which can be moved, wholly or partially, out of alinement in order to limit or shut off the air to the radiator. The outer or fixed section is attached to the front of the radiator by suitable means, and the inner section is adapted to be moved in guides on the outer section so as to increase or decrease the supply of air admitted to the radiator, as hereinafter described.

9 represents the outer fixed section of the protector which, as shown in the drawings, is substantially square in outline but which can of course be made of suitable shape to fit the fronts of radiators of different makes.

This section 9 consists of a substantially flat front plate 10 and marginal flanges or members 11 which extend at right angles thereto and which at the sides of the protector have flanges 12 extending inwardly from the edges thereof. Angle strips 13 are secured in any suitable manner to the side members 11 parallel to the front plate and form one wall of the slots or guides 14, the other wall thereof being formed by the parallel vertically arranged strips 15 which are adjacent to the front plate 10.

The movable section or plate 16, which is approximately the same shape but slightly smaller in size than the outer section, has side edge portions 17 which extend into and are adapted to be guided by the slots 14, so that the section 16 is capable of vertical movement in respect to the fixed section. The side edges of the section 16 can be cut away between the guide portions 17, if desired, as indicated at 18, so as to decrease the weight of the section and make it slide more freely in the guide slots. Because of the spacing strips 15 the two sections, while close together, are not in actual contact and therefore cannot become "stuck" or jammed. The movable section is provided at the top thereof with an inwardly extending cross piece or flange 19.

While the construction described is the preferable one, yet any method of slidably mounting the movable section on the fixed section which allows the movable section to slide freely in a plane parallel with the plane of the fixed section can be used in place thereof.

20 represents a number of small openings or ports formed in the outer or fixed section, which are preferably square in outline, and 21 is a number of similar openings formed in the inner or movable section 16. A spring 22, preferably attached at its lower end to the bottom flange of the fixed section and at its upper end to the top flange or

cross piece 19 of the movable member, serves to normally keep the inner section in the lowered position, shown in Figs. 1 and 3, so that the ports or openings 21 thereof register with the openings 20 of the outer section and the outside air is free to enter the radiator.

Means of various different sorts could be employed for shifting the movable section so as to cut off the air to the radiator as desired, the following means being shown for the purpose:

A rocking crank or lever 23 is bolted or fastened in some other suitable manner to the front of the radiator above the protector, and a rod or chain 25 connects one end of this lever with the center of the top piece 19 of the movable section of the radiator. The other end of the lever has a wire or cord 26 fastened thereto, which wire passes downwardly in front of the protector and over a pulley 27 which is mounted at the bottom of the radiator. From there it leads to the driver's seat so that by means thereof the driver can raise the inner section relatively to the outer section into such position as to limit or cut off the supply of air admitted to the radiator as desired. The wire should be so fastened at the driver's seat that the protector can be readily secured in any position to which it is moved by the wire. This can be done by any suitable means, and as the same form no part of the present invention they are not herein shown or described.

The protector can also be fastened to the front of the radiator in any suitable manner. As shown, the flanges 12 abut against the radiator front, fitting within a marginal bead 28 on the radiator, while bolts 29 pass through the two sections and the air passages of the radiator, but any other suitable method of securing the protector to the radiator can be employed. If the bolts 29 are used, slots 30 are cut in the inner section 15 of the protector for the passage of the bolts, so as to allow free vertical movement of the inner section.

By using the protector as described, the supply of air admitted to the radiator can be shut off entirely when the engine of the automobile stops running, or it can be diminished to the extent necessary to insure proper operation of the engine in cold weather. All this can be accomplished from the driver's seat without trouble and no further attention need be paid to the protector until it is again desired to vary the amount of air admitted.

I claim as my invention:

The combination of a protector comprising an integral outer section containing a number of openings therein, means for securing the outer section in front of an automobile radiator, an integral inner section adapted to move vertically parallel with the plane of said outer section and also containing a number of openings adapted to register with openings in the outer section, operating means controlled from the driver's seat for moving the inner section in a vertical plane and relatively to the fixed section, and spring means connecting the fixed and movable sections for returning the movable section to normal position.

Witness my hand this 1st day of March, 1915.

WALTER C. FARRELL.

Witnesses:
KARL E. WILHELM,
C. B. HORNBECK.