F. K. EASTMAN.

RADIATOR COVER.

APPLICATION FILED FEB. 26, 1918.

1,308,056. Patented July 1, 1919.

FIG. 1

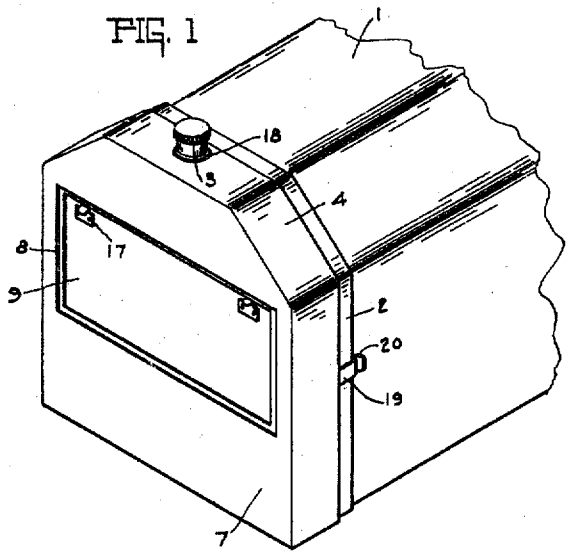


FIG. 2

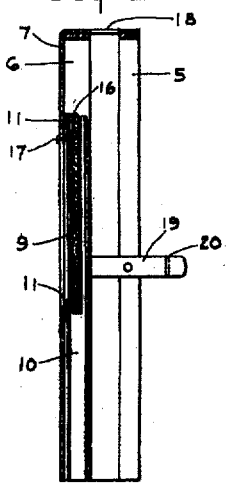


FIG. 3

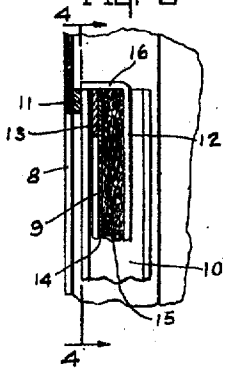
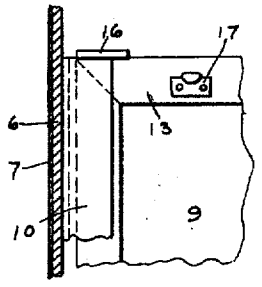


FIG. 4



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RADIATOR-COVER.

1,308,056. Specification of Letters Patent. Patented July 1, 1919.

Application filed February 26, 1918. Serial No. 219,201.

To all whom it may concern:

Be it known that I, FLOYD K. EASTMAN, a citizen of the United States, and a resident of Indianapolis, county of Marion, and State of Indiana, have invented a certain new and useful Radiator-Cover; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like numerals refer to like parts.

This invention relates to radiator hoods and the prime object of the invention is to provide a cover for the radiator which may be quickly attached thereto or removed therefrom, said hood having a window or opening in the front portion thereof, the passage of air through the opening being controlled by a vertically slidable shutter.

A further feature of the invention is the provision of means for holding the shutter in its upper or closed position.

A further feature of the invention is in constructing the means for supporting the shutter in such a manner that the suction created by the motor fan will release the shutter and permit the same to descend by gravity.

A further feature of the invention is the provision of means for quickly and securely attaching the hood to the radiator. Other objects and advantages will be hereinafter more fully set forth and pointed out in the accompanying specification.

In the accompanying drawings which are made a part of this application, Figure 1 is a perspective view of the front end of an automobile showing the improved hood applied thereto. Fig. 2 is a central, vertical, transverse, sectional view through the hood, removed from the radiator. Fig. 3 is an enlarged detail sectional view showing the manner of supporting the shutter in its closed position. Fig. 4 is a sectional view as seen on line 4—4 Fig. 3.

Referring to the drawings in which similar reference numerals designate the corresponding parts throughout the several views, 1 indicates the front end of an automobile which may be of any preferred construction, 2 indicates the radiator therefor; said radiator having the usual form of filling extension 3 through which water may be introduced into the radiator.

As it is necessary for air to pass through the radiator in order to cool the motor, and in view of the fact that in extremely cold weather the water will freeze when the motor is not in action, I have provided my improved form of hood 4, which may be constructed in any preferred manner and of any suitable material, but in this instance the hood consists of a pair of frame bars 5 and 6 which are constructed to fit around the upper and side edges of the radiator and over the frame bars is secured a cover 7 of leather or similar material, said cover extending over the side and top edges of the radiator as well as the front thereof.

That portion of the cover extending over the front of the radiator is provided with an opening 8 through which air may freely pass to the radiator; and in order to prevent the air from striking the radiator through the opening when the car or motor is not in action, a shutter 9 is slidably mounted in guides 10, attached to the inner face of the frame bar 6 at each end of the opening 8 and between the cover 7 and the front of the radiator, said shutter when in its elevated position completely closing the opening 8.

The frame bar 6 and the edges of the cover at the top and bottom of the opening 8 are reinforced in any suitable manner as by means of cross-bars 11, the guides 10 being also attached to the cross-bars as well as to the frame bar 6.

The shutter 9 is preferably constructed of a sheet of metal 12 which is bent at its edges to form a frame 13, and inclosed in said frame is a facing of leather or similar material 14, and between said facing and the metal 12 any suitable form of packing 15 is placed.

The shutter is held in its elevated position by forming fingers 16 at the upper edge of the shutter which project in a horizontal plane and are adapted to rest on the upper ends of the guides 10 when the shutter is in its closed position, and owing to the fact that said fingers are straight from end to end, the least inward pressure on the shutter will release the fingers from the guides and permit the shutter to descend by gravity, the width of the guides being such as to permit sufficient lateral movement of the shutter therein to release the fingers from the guides. Should the driver forget to lower the shutter before entering the vehicle, it will not be necessary for him again to alight and release the shutter manually, as the suction created by the fan when the motor is started will be sufficient to move the shutter rearwardly and

release the fingers from the guides whereupon the shutter will descend by gravity.

The upper bar of the frame 13 is provided with curved finger grips 17 which may be grasped to elevate the shutter and when the shutter is in its lowered position said grips overhang the cross-bar 11 at the lower edge of the opening 8 and limit the descent of the shutter. When the shutter is in its lowered position, the lower edge preferably projects a distance below the lower end of the radiator, thereby doubly protecting the lower portion of the radiator, which is naturally farthest from the point of entrance of the water from the motor into the radiator and consequently cools quicker than any other portion of the radiator.

In the form of hood shown in the drawing an opening 18 is formed in that portion of the cover extending over the upper end of the radiator, through which the filler cap projects while the frame of the hood is locked in engagement with the radiator by attaching spring arms 19 to the frame bars 5 and 6, the inner ends of the arms 19 projecting beyond the frame bar 5 and having latch ends 20 which snap over the edges of the radiator to hold the hood structure in position on the radiator.

In operation, when the motor is running, the shutter 9 is in a lowered position so that air can readily pass through the opening 8 and through the radiator, but when the motor is stopped, in order to exclude air from the radiator as in cold weather, the shutter is raised to its full height and the fingers 16 rest upon the upper ends of the guides 10 thus completely closing the opening 8.

When the car is to be again used, inward pressure may be directed against the outer face of the shutter 9 which will cause the fingers 16 to disengage from the guides 10, whereupon the shutter will descend by gravity until the grips 17 engage the cross-bar 11 at the lower end of the opening 8 thus stopping the descent of the shutter.

This device can be constructed to fit any shape of radiator, and owing to its simplicity can be very cheaply constructed and quickly applied or removed from the radiator, and as there are no parts of the device to become worn or injured it will last indefinitely.

The invention claimed is:

1. A shutter structure for automobile radiators including vertical guides adapted to be connected with the lateral portion of the radiator, a shutter vertically movable in said guides in front of the radiator, and also adapted to have movement in said guides toward or away from the radiator, and means for supporting the shutter in its closed position away from the radiator adapted to be released by inward movement of the shutter toward the radiator caused by the suction of the air through the radiator after the engine of the automobile is under operation, whereby the shutter would drop down into open position.

2. A radiator cover including an opening therethrough adapted to be located in front of the radiator, a shutter for closing said opening, guides within the cover for vertically guiding the shutter and made so as to permit the shutter to move toward and from the radiator, and means for supporting the shutter on the cover which will be released when the shutter is moved toward the radiator and will drop down into open position.

3. A radiator cover having an opening adapted to be located in front of the radiator, a shutter for closing said opening, vertical guides inside the cover for guiding the shutter, said guides being wide enough to permit inward movement of the shutter and a finger on the shutter adapted to releasably engage the cover and support the shutter in closed position so as to be released when the shutter is moved inward and thus cause the shutter to descend in open position.

4. A radiator cover having an opening adapted to be located in front of the radiator, a shutter for closing said opening, vertical guides inside the cover for guiding the shutter, said guides being wide enough to permit inward movement of the shutter, and a finger on the shutter for engaging the cover and supporting the shutter after it has dropped down into open position.

5. The combination with a radiator, of a hood structure comprising a covering adapted to extend over the top and side edges of the radiator and over the front portion thereof, the front portion of the covering having an opening therethrough, guides within said covering and extending vertically of said opening, a shutter slidable in said guides, and horizontally extending fingers at the upper edge of the shutter adapted to rest upon the upper ends of the guides to support said shutter in its elevated position.

6. In a radiator hood, a covering having an opening therethrough, guides on the interior of said cover and extending vertically thereof, a shutter slidable in said guides, said guides being of sufficient width to permit inward movement of the shutter, and fingers at the upper edge of the shutter adapted to rest upon the upper end of the guides and hold the shutter in its elevated position.

7. A hood for radiators, comprising frame members, a cover on said frame members, the front face of the cover having an opening, guides carried by one of the frame members and interiorly of the cover, a shutter slidable in said guides and adapted to close the opening when in elevated position, hori-

zontally extending fingers on the shutter adapted to rest on the upper end of the guides when the shutter is in a closed position, said guides being of sufficient width to permit inward movement of the shutter to disengage the fingers from the ends of the guides and means to limit the downward movement of the shutter.

8. The combination with a radiator, of a hood structure adapted to fit over the radiator, said hood having an opening in the front thereof, guides extending vertically of said opening, a shutter adapted to slide in said guides and being inwardly movable therein by receiving pressure thereon, and means on the shutter adapted to rest on the upper ends of said guides and hold the shutter in elevated position, said means being releasable by the lateral inward movement of the shutter to descend by gravity.

In witness whereof, I have hereunto affixed my signature.

FLOYD K. EASTMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."