July 29, 1930. S. E. HOLT 1,771,679

LOUVER SHUTTER

Filed Dec. 27, 1927

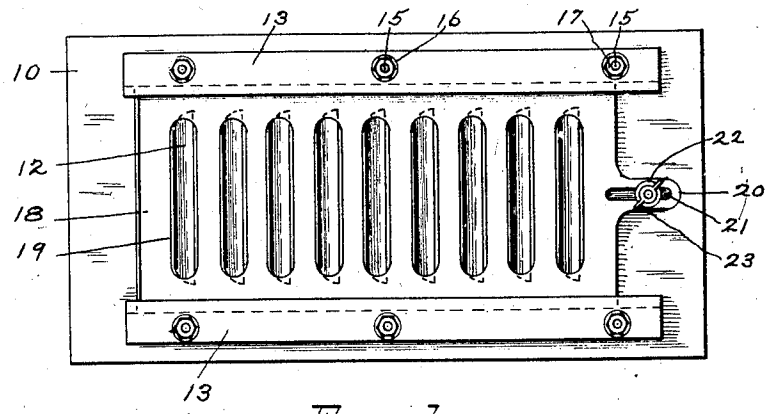


Fig 1

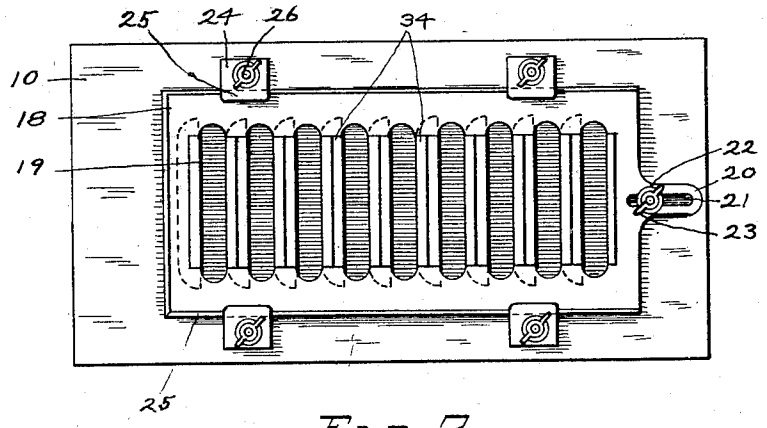


Fig 2

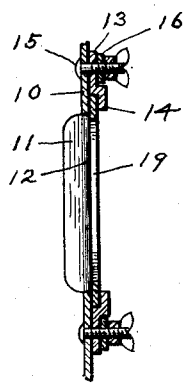


Fig 3

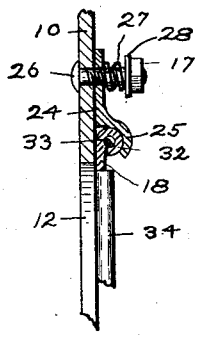


Fig 4

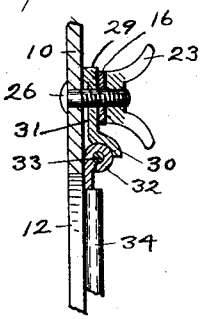


Fig 5

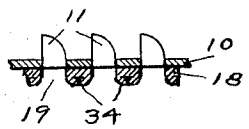


Fig 6

INVENTOR.
Samuel E. Holt.
BY John J. Thompson
ATTORNEYS.

Patented July 29, 1930 1,771,679

UNITED STATES PATENT OFFICE

SAMUEL E. HOLT, OF RHINEBECK, NEW YORK

LOUVER SHUTTER

Application filed December 27, 1927. Serial No. 242,691.

This invention relates to a louver shutter, primarily for use with the hoods or engine coverings of automobiles, aeroplanes or other vehicles in which is employed a gas or other motor which to operate most efficiently should be kept at a certain temperature, especially in cold weather, and having a covering so arranged as to provide for circulation of air during hot weather, but providing means for retaining the hot air during cold weather.

Thus in the operation of automobiles in winter, it is essential that the louver openings in the hood be partly or fully closed to prevent the escape of the hot air from the motor, in a similar manner to that now in use for regulating the amount of cold air which passes through the radiator.

The object of the present invention is to provide means either to be incorporated into the manufacture of the hood, or to be in the form of an attachment which may be attached to any hood now in use, and which may be operated to partly or fully close the louver openings.

Another object is to provide a louver shutter or closing device that is so arranged as to partly or fully close the louver openings, and provided with means for locking the device in any desired position.

Still another object is to provide a louver shutter that shall be easily operated and free from noise and rattle; and in which each shutter can be operated in an independent manner from the other, so that the louver shutter on one side of the hood may if desired be partly closed and the other fully closed, this condition being desirable when a cold wind strikes one side of the automobile during a steady run in one direction.

It is also to be understood that the device may be in the form of shutters similar to those used to cover the radiator of an automobile, said shutters being hinged and connected together to an operating rod or other means of adjustment.

With these and other objects in view, my invention consists in certain construction and combination of parts as will hereinafter be fully described and claimed, and illustrated in the accompanying drawings which form a part hereof and in which like figures of reference refer to corresponding parts in all of the views, but it is understood that slight changes may be made without departing from the spirit of the invention.

In the drawings:—

Figure 1 shows the inside of an automobile hood, formed with the usual louvers and having the louver shutter attached or incorporated into the manufacture thereof.

Figure 2 shows a similar view of the inside of one side of an automobile hood, with the louver shutter mounted as an attachment.

Figure 3 shows a vertical section of the hood, shutter and attaching means as used in the construction shown in Figure 2.

Figure 4 is an enlarged fragmentary sectional view of a modified form of clamping means for the shutter.

Figure 5 is a similar view showing still another form of guiding and clamping means.

Figure 6 is a partial sectional view to illustrate how the material sheared from the openings in the shutter is folded back upon itself to stiffen the bar between said openings.

Referring to the drawings, the usual automobile hood side 10, is shown which is formed with the usual series of louvers 11 and louver openings 12.

In the construction shown in Figures 1 and 3, which is intended to be a part of the hood when the same is made, there are two guide strips 13, being formed with an offset 14 and the body portion being secured to the side of the hood 10 by the bolts 15 passed therethrough and secured by the lock washers 16 and the nuts 17.

Within these guides is slidably mounted a louver shutter, comprising a sheet of suitable material such as a light metal, which is formed with a series of openings 19 adapted to register with the openings 12 in the hood when the shutter 18 is in the proper position, and a tongue 20 formed on one end thereof and provided with a slot 21, within which is mounted a bolt extending through the hood 10, and provided with a lock washer 22 and a wing nut 23, for locking the shutter 18 in any desired position, the lock washer providing a tension to prevent rattle or noise.

In the construction shown in the remaining figures and which is intended as an attachment for hoods now in use, the guiding and mounting means is shown in the form of a series of clamps 24.

These clamps 24 as shown in Figure 4, being formed with a curved end adapted to engage the rolled or turned edge 25 of the shutter 18, and held in place by a bolt 26 passed through the side of the hood 10, and provided with a coil spring 27 or lock washer 28, retained by the wing nut 23 or the usual nut 17; the idea of the spring 27 or lock washer 28 being to prevent rattle by providing a tension on the shutter 18.

In the construction shown in Figure 5, the clamp 29 besides having the curved end 30, is undercut as at 31, so that it stands away from the hood 10 and the action of the wing nut will produce a clamping effect on the shutter 18, in such a maner that to move the shutter these nuts 23 must first be loosened, and then after the shutter is placed in proper position for partly or fully closing the louver openings, by the tightening of the wing nuts 23 the shutter will be secured in place.

As shown in Figures 4, 5 and 6, the shutter 18 may be reinforced by rolling the edge 32 over a wire 33, and by folding back the metal sheared from the openings 19 to stiffen the bars as at 34.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

A louver shutter, comprising in combination with a hood formed with a series of louver openings in the sides thereof, of a shutter comprising a single piece formed with a series of openings adapted to register with said louver openings when in an open position, a beading formed on the upper and lower edges of said shutter, guide strips formed with a grooved portion adapted to engage said beading and means for attaching said guide strips to said hood to exert pressure upon said beading to retain said shutter in an adjusted position with respect to said hood.

In testimony whereof I affix my signature.

SAMUEL E. HOLT.