April 25, 1933. E. W. HORNUNG 1,905,394

VENTILATOR

Filed May 22, 1931

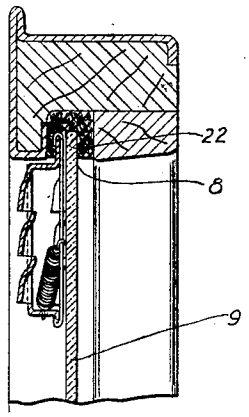


Fig. 2

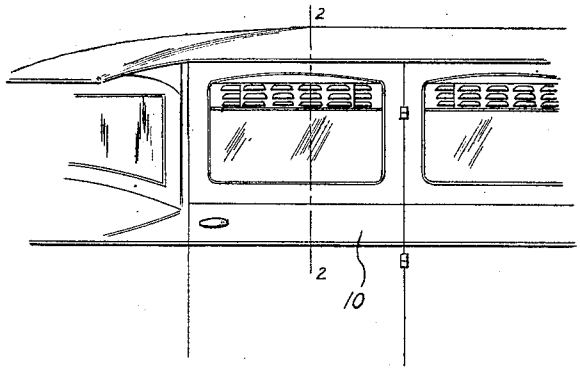


Fig. 1.

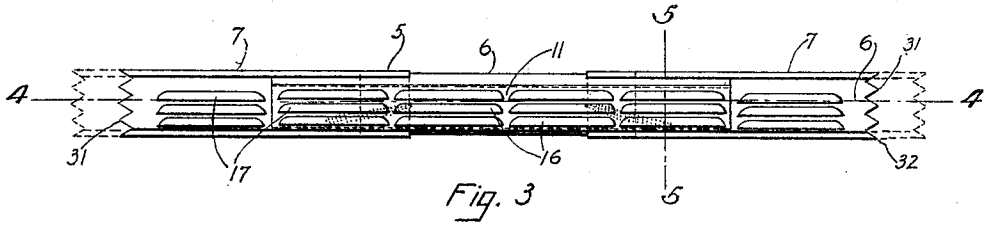


Fig. 3

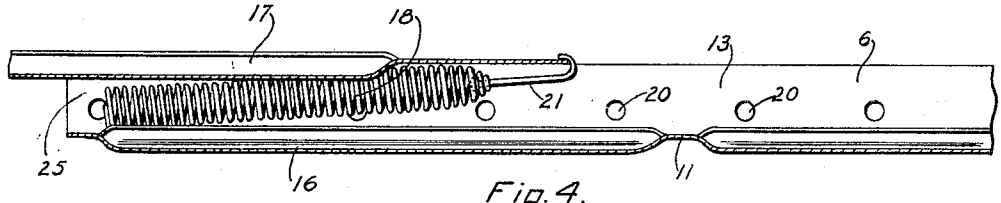


Fig. 4.

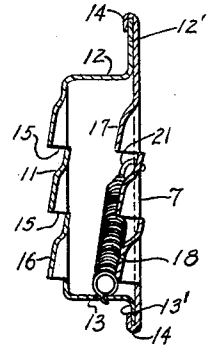


Fig. 5.

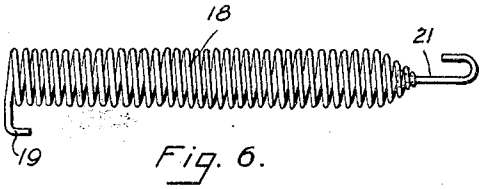


Fig. 6.

INVENTOR.

BY E. W. HORNUNG

Fisher, Moser & Moore

ATTORNEY.

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UNITED STATES PATENT OFFICE

ERNEST W. HORNUNG, OF CLEVELAND, OHIO

VENTILATOR

Application filed May 22, 1931. Serial No. 539,277.

This invention relates to improvements in window ventilators for vehicles, such as automobiles, railway and street cars, motor boats, air-ships and other closed vehicles, but more particularly to ventilators for the windows of closed automobiles.

The general object of the invention is to provide a ventilator of improved construction which can be readily mounted in a window frame whereby the movement of the vehicle sets up a circulation of air in the vehicle body and causes the withdrawal of air therefrom through the ventilator.

Another object of the invention is to provide a ventilator which can be readily adjusted by an unskilled person to fit window openings of different sizes, and which can be readily attached to or removed from a window frame without the use of tools.

Another object of the invention is to provide a ventilator of few parts, which is constructed so as to prevent rattling or jarring loose due to the vibration of the vehicle.

A still further object is to provide means for the drainage of rain which may enter the ventilator.

Other advantages and objects will be more apparent from the following description considered in connection with the accompanying drawing, in which:

Figure 1 is a detailed side elevation of an automobile window equipped with the improved ventilator. Figure 2 is a section taken on the line 2—2 of Figure 1. Figure 3 is a side elevation of the ventilator detached. Figure 4 is an enlarged fragmentary section on line 4—4 of Figure 3. Figure 5 is an enlarged sectional view on line 5—5 of Figure 3. Figure 6 is a side elevation of the spring.

Referring more particularly to the drawing 5 designates my improved ventilator, including a sheet metal body 6 having adjustable and interchangeable end plates 7, slidably mounted thereon for engagement in the side channels 8 of the sliding window 9 of a closed-body type automobile 10, without interference with the raising or lowering of the window. The body 6 comprises a vertical front wall 11 and horizontally disposed top and bottom walls 12 and 13 respectively, the latter two walls being formed with oppositely extending flanges 12′ and 13′ which engage within or slidably receive the longitudinal upper and lower rolled edges or flanges 14 of the end plates 7.

The body 6 of my improved ventilator is also provided with a plurality of spaced air inlet openings 15, preferably formed by cutting the front wall 11 thereof at predetermined intervals and then bending outwardly the material immediately above the cuts, to form horizontally disposed louvers 16, which project outwardly from the body and overlie the openings and thus effectually exclude rain and sleet from entering the vehicle. End plates 7 are also formed with louvers 17, which co-operate with the louvers 16 in an obvious manner.

Coil springs 18, one for each end plate 7, are employed to resiliently hold the latter in tight engagement with the side channels 8 of the window. The outer end of each spring is bent to form a fixed or immovable hook-shaped portion 19, which engages in one of a series of small openings 20 in the bottom wall 13 of the body 6, while the inner end is provided with a swiveled hook 21 adapted to engage over the inner end of its respective end plate 7. Thus, when the springs are in the position described the ventilator can be easily and quickly installed by inserting the serrated end 31 of one end plate in its respective side channel 8 and then forcing one or both of the end plates inwardly against the tension of the springs to permit insertion of the other end plate in the opposing channel 8. Upon release of pressure the end plates will be forced into tight anti-rattling engagement in an obvious manner. Adjustment for the purpose of placing the end plates under greater or lesser tension or to accommodate the ventilator to fit any size of window can be made by shifting the fixed or rigid hook members 19 in an appropriate direction from one opening 20 to another. These openings provide a drain for the escape of rain or sleet which may reach the chamber or channel 25 extending longitudinally of the ventilator.

When the ventilator is in operative posi-

tion within a window, the coil springs having a tendency to tilt the outer and lower contact corners 32 of the end plates upwardly into tight engagement with the window channels, thus effectively locking the ventilator in place. It should be noted that the upper rolled longitudinal edges 14 of the end plate and the upper flange 12′ of the body 6 are snugly received in the upper chamber 22 of the window. The flange 12′ is of substantial width as compared to flange 13′ so as to fit the window openings of recent models of closed bodies, the gap caused by the contour at the top of the opening being filled in by the flange.

When the vehicle is in motion air will be caused to enter the chamber or channel 25 through the open ends of the body and also through the louver openings, thus setting up a circulation of air in the vehicle body and causing the withdrawal of air therefrom.

What I claim, is:

1. A ventilator comprising a body having front, top and bottom walls, plates slidably secured to the top and bottom walls and projecting beyond the ends of the body, resilient members having means at one end adapted to engage the inner ends of said plates for opposing inward movement thereof, said bottom wall having a series of openings therein, and means on the other end of said resilient member for engagement with said openings.

2. A ventilator comprising a body having a reticulated front wall, and top and bottom walls, flanges formed on said top and bottom walls, a pair of end plates having flanges slidably engaging said first mentioned flanges, said bottom wall having a series of openings formed therein, and a pair of coiled springs having a fixed hooked portion at one end for engagement with said openings and having a hook swiveled to the other end thereof for engagement with the inner ends of said end plates.

3. A ventilator comprising a body having air openings therein, attaching plates slidably mounted on said body and projecting beyond the ends thereof, said body having a bottom wall provided with a series of drain openings therein, coil springs for resisting the inward sliding movement of said plates, having means at one end for detachably engaging in said openings, and means at the other end of said springs adapted for swiveled engagement with said end plates.

In testimony whereof I affix my signature.

ERNEST W. HORNUNG.