

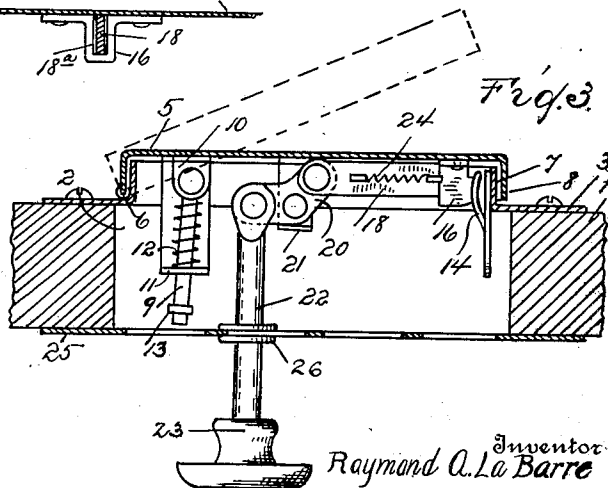
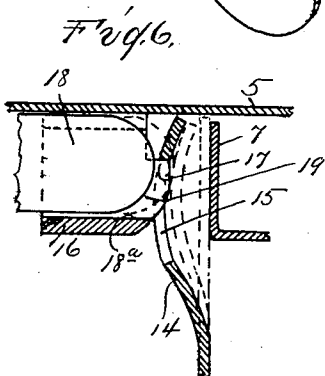
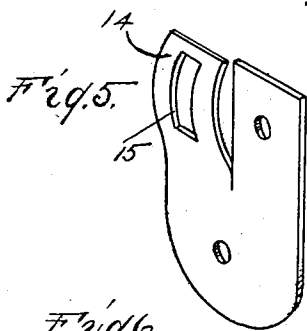
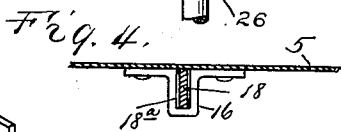
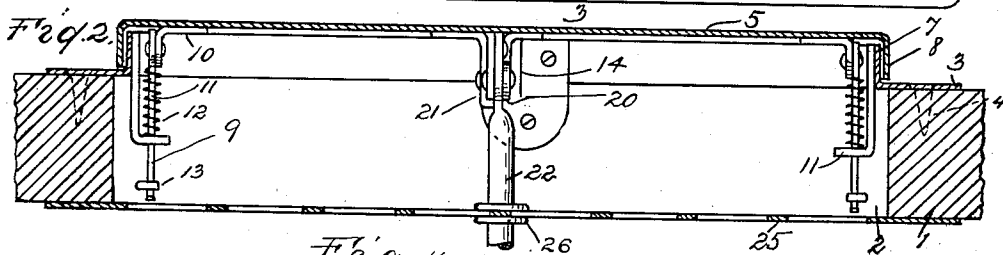
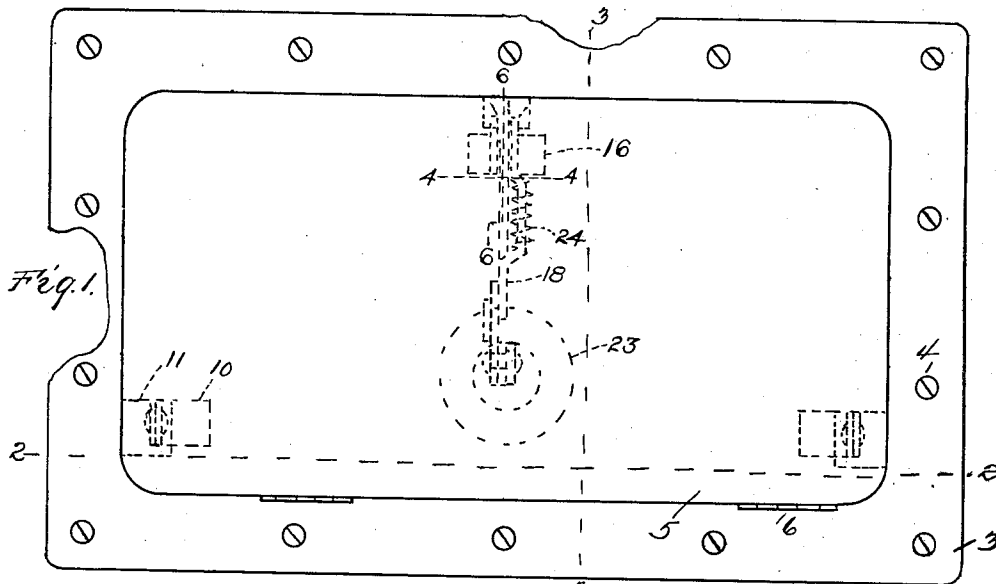
Jan. 8, 1924.

1,480,274

R. A. LA BARRE

VENTILATOR FOR CLOSED CARS

Filed May 27, 1920



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UNITED STATES PATENT OFFICE.

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VENTILATOR FOR CLOSED CARS.

Application filed May 27, 1920. Serial No. 384,526.

To all whom it may concern:

Be it known that I, RAYMOND A. LA BARRE, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Ventilators for Closed Cars, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to ventilators for automobiles and more particularly to ventilators designed to be arranged in the top of a closed car.

Among the objects sought by the invention are the elimination of excessive vibration and rattle both in the closed and open positions of the ventilator; the avoidance of adjusting screws or hand operated clamping devices; the provision for automatically latching the closure of the ventilator in its closed position and for automatically opening said closure when unlatched, and the mounting of the closure and of the controlling mechanism therefor as a complete unit upon a frame adapted to be quickly attached to the car.

Other objects of the invention will appear more fully hereinafter.

In the accompanying drawings:

Figure 1 is a top or exterior view of the improved ventilator.

Figure 2 is a vertical sectional view of the same taken upon the line 2—2 of Figure 1.

Figure 3 is a vertical section transverse to that of Figure 2 taken on the line 3—3 of Figure 1.

Figure 4 is a detail sectional view of the latch mechanism, taken on line 4—4 of Figure 1.

Figure 5 is perspective detail of the latch plate.

Figure 6 is an enlarged sectional detail of the latch mechanism taken on line 6—6 of Figure 1.

In these views the reference character 1 designates the top of a closed car and 2 is a ventilating aperture therein. A metal frame 3 bordering the opening 2 is exteriorly secured to the top 1 by screws 4 and a sheet metal closure 5 is hinged at 6 to said frame. Preferably an upstanding flange 7 is formed upon the frame 3, peripheral to the opening 2 and is adapted to be embraced in the

closure 5 by a depending flange 8 formed marginally on said closure. When opened the closure 5 assumes the inclined position illustrated in dash lines in Figure 3, rain or the like being thus excluded from said opening. To establish said limiting open position, a pair of pins 9 are respectively secured to the closure at opposite ends thereof, the upper extremities of said pins being pivoted upon brackets 10 secured to the under face of the closure, while the lower portions of said pins having sliding engagement with brackets 11, rigidly depending from the respective ends of the frame 3. Springs 12 are coiled upon said pins to actuate the opening movement of the closure and to prevent vibration and rattling of the same both in its opened and closed positions; to limit the opening movement, the lower ends of said pins are respectively provided with heads 13 which are adapted to abut against the brackets 11.

To maintain the closure in closed position, there is provided a latch mechanism comprising a spring latch plate 14, which is interiorly secured to that portion of the flange 7 engageable by the free edge of the closure, said plate being formed with a rectangular opening 15, and a latch head 16 is secured to the underface of the closure so as to slightly deflect the latch plate 14, during the seating of the closure, said head having a shoulder portion 17, which enters the opening 15 when the closure is seated and latches the same.

To effect unlatching, there is provided upon the closure a release bar 18 which is slidable in an opening 18^a of the head 16 and which is formed with a rounded forward end 19, normally disposed within said head, which end when slightly projected is adapted to engage and deflect the spring plate 14 to release the head 16 therefrom. The rear end of the bar 18 engages one of the arms of a bell crank 20 pivoted upon a bracket 21 secured to the underface of the closure 5 and the other arm of said bell crank is engaged by the upper end of a depending control stem 22 having upon its lower end the handle 23. A coiled spring 24 is engaged with the release bar 18 to normally maintain the retracted position thereof. The opening 2 is covered interiorly of the top 1 by a grated finishing plate 25,

which is apertured to give passage to the stem 22. A rubber gromet 26 embraces said stem within said opening of the grating 25 to secure a more noiseless operation.

5 The mounting of the closure 5 and the entire operating mechanism therefor upon the frame 3, materially simplifies installation of the ventilator, the latter being quickly attachable exteriorly of the car by simply fastening said frame in place by means of the screws 4. The construction is simplified by employing the handled stem 22 as a means both for releasing the latch to effect opening of the closure and for returning the latter to its closed position. The closure being stressed by the springs 12, in both of its limiting positions is not subject to objectionable rattling or vibration and is in fact practically noiseless. The operation of the ventilator is simplified by the employment of spring means both to effect latching and to shift the closure to opened position when unlatched. The grated plate 25 conceals the working mechanism and imparts a finished appearance to the device.

What I claim as my invention is:

1. A ventilator for vehicles comprising an open frame, a closure hinged to said frame inclined at an angle to said frame in open position, means limiting the opening movement of the closure, yieldable means engaging said limiting means and actuating said movement, and means for maintaining the closed position of the closure.

2. A ventilator for vehicles comprising an open frame, a closure hinged to said frame, means carried by the frame and closure limiting the opening movement, spring means carried by the frame and closure for effecting the opening movement, and mechanism jointly carried by the frame and the closure for maintaining the closed position of the closure.

3. A ventilator for vehicles comprising an open frame, a closure hinged to said frame and occupying an acute angle to the frame in open position, means limiting the opening movement, spring means for effecting said movement, means for maintaining the closed position of the closure and a common control member for releasing said last mentioned means and for shifting the closure from opened to closed position.

4. A ventilator for vehicles comprising an open frame, a closure hinged to said frame, a pin connecting said closure and frame and limiting opening movement of the former, a spring coiled upon said pin to effect said

movement and a mechanism for maintaining the closed position of the closure.

5. A ventilator for vehicles comprising an open frame, a closure hinged to said frame, a latch head carried by said closure, a spring latch plate secured to the frame and engageable by said head in the closed position of the closure, a slidable release bar mounted upon the closure and adapted to deflect said latch plate when projected to release said head therefrom and a control member for said release bar depending from the closure.

6. A ventilator for vehicles comprising an open frame, a closure hinged to said frame, a latch mechanism therefor, a release bar for said latch mechanism slidably mounted upon the closure, a bell crank pivoted on said closure for actuating said release bar, spring means for opening the closure, and a stem depending from said bell crank to actuate the release bar and to effect shifting of the closure from open to closed position.

7. In a device of the character described, the combination with a vehicle top formed with a ventilating opening, of a closure for said opening mounted exteriorly upon said top, a grated finishing plate covering said opening interiorly of the top, latch mechanism for said closure carried by the top and closure member, and a stem depending from the closure and passing through said finishing plate forming a control member for the latch mechanism and for shifting the closure.

8. A ventilator comprising an open frame, a closure for said frame, a bracket carried by the frame, a member carried by the closure slidably engaging the bracket, yieldable means engaging said member for actuating the opening movement of the closure, and means carried by said member engageable with said bracket for limiting the opening movement of the closure.

9. The combination with a support having a ventilating opening therein, of a frame secured to one side of said support and surrounding said opening, a grate secured to the opposite side of said support and extending across said opening, a closure for said opening mounted on said frame, a latch upon said frame, a member carried by said closure engageable with said latch for holding said closure in closed position, and a member extending through said grate adapted to actuate the member aforesaid to release said closure.

In testimony whereof I affix my signature.

RAYMOND A. LA BARRE.