L. K. SNELL.

VENTILATOR FOR AUTOMOBILE BODIES.

APPLICATION FILED FEB. 27, 1915.

1,218,708.

Patented Mar. 13, 1917.

2 SHEETS—SHEET 1.

Fig. 3

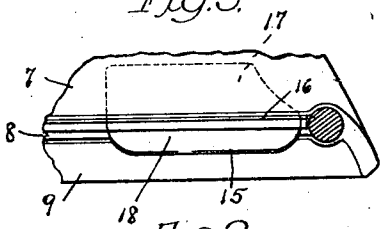
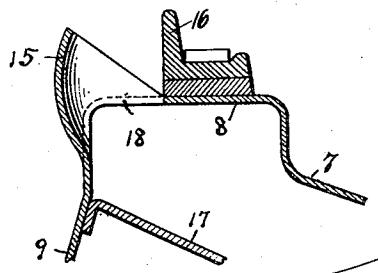


Fig 2



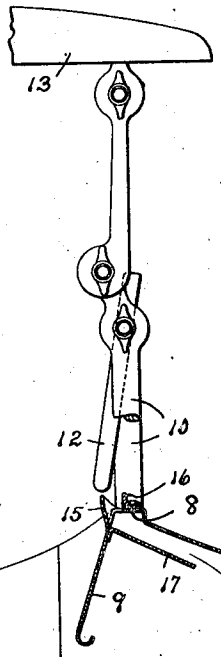


Fig 1.

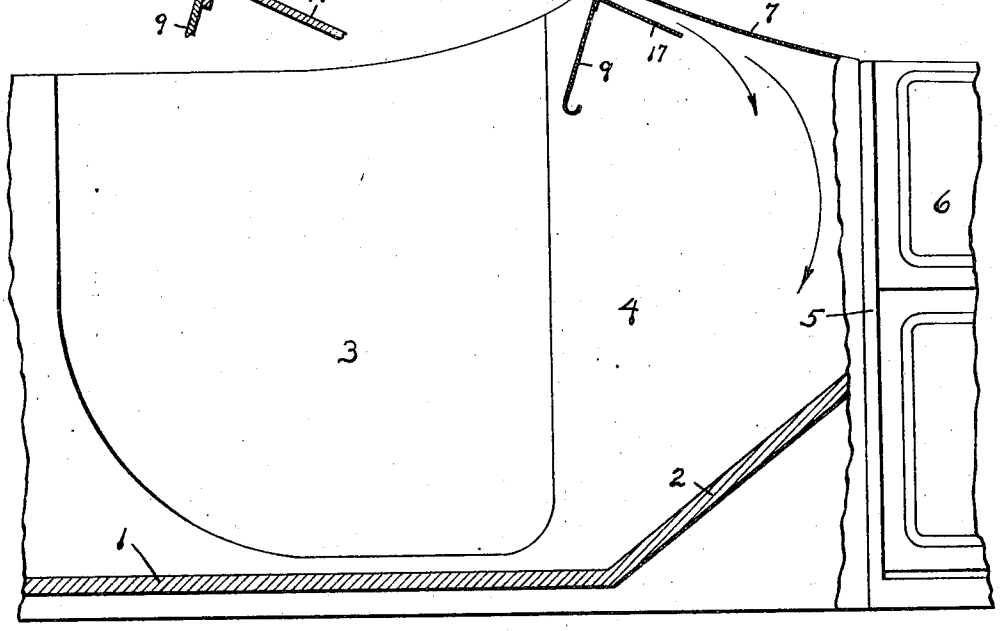
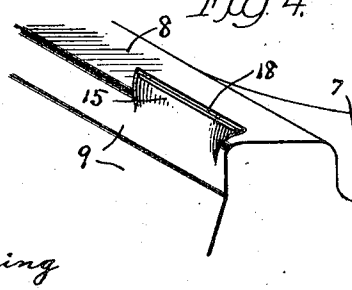


Fig 4.



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2 SHEETS—SHEET 2.

Fig. 5.

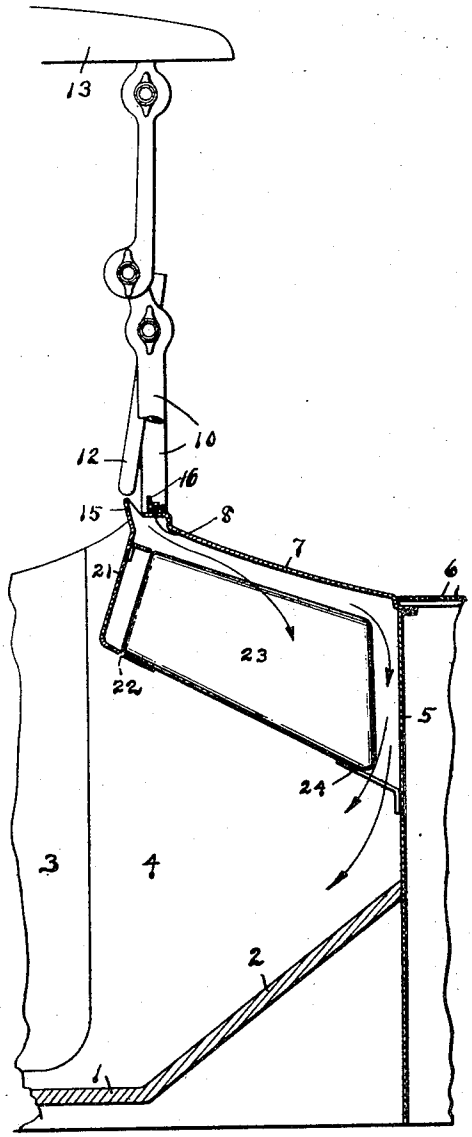


Fig. 6.

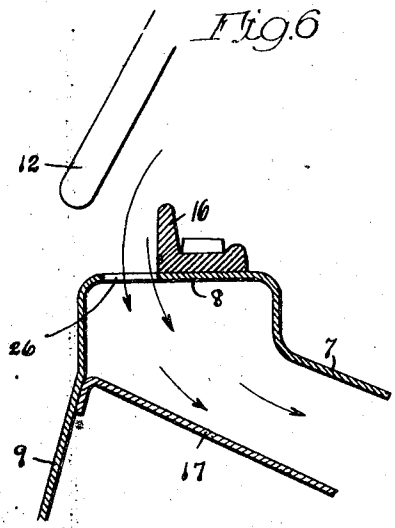
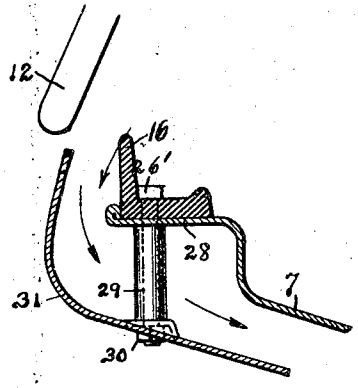


Fig. 7.



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UNITED STATES PATENT OFFICE.

LYLE K. SNELL, OF DETROIT, MICHIGAN, ASSIGNOR TO CADILLAC MOTOR CAR COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

VENTILATOR FOR AUTOMOBILE-BODIES.

1,218,708. Specification of Letters Patent. Patented Mar. 13, 1917.

Application filed February 27, 1915. Serial No. 10,837.

To all whom it may concern:

Be it known that I, LYLE K. SNELL, a citizen of the United States, and a resident of Detroit, in the county of Wayne and State of Michigan, have invented a new and Improved Ventilator for Automobile-Bodies, of which the following is a specification.

This invention relates to ventilators for the front ends of automobile bodies, and its object is to provide means for causing currents of air to pass around the feet of persons riding on the front seats.

This invention may be carried out by forming the rail of the vehicle just below the wind-shield with one or more openings, the metal that is cut away to form each opening being bent back so as to constitute deflectors or louvers, other deflectors being mounted below the openings and extending forwardly to deflect forwardly the air that enters through said openings. Or it may be carried out by substituting a fuel tank for the lower deflector. It may also be carried out by omitting the louver formed by cutting free a portion of the material constituting the rail and depending upon the wind-shield to deflect the air into the openings in the rail and also by securing a separate deflector to the rail itself.

In the accompanying drawings, Figure 1 is a longitudinal section of a portion of the body of an automobile, the hood being shown in elevation. Fig. 2 is a detail of the same on a larger scale. Fig. 3 is a plan of a ventilator opening. Fig. 4 is a perspective of a portion of a rail and a deflector. Figs. 5, 6 and 7 are sections similar to Fig. 1 of modified forms of this invention.

Similar reference characters refer to like parts throughout the several views.

The vehicle shown in Fig. 1 embodies a floor 1, foot board 2, side door 3 in the side 4, dash 5, hood 6, cowl 7, rail 8, instrument board 9, side supports 10 for the wind-shield 12 and top 13 of any desired construction.

The rail 8 between the instrument board 9 and cowl 7 is formed with any desired number of longitudinal slits of any desired length, and the metal at one side of the slits is bumped up and forced back to form the louvers 15, the height being such as to just avoid engaging the lower edge of the wind-shield when swung back. On the rail may be secured the usual rubber dam 16 whose upper edge may contact with the lower edge of the shield. The ends of the louvers 15 are preferably left connected to the rail 8.

It will be noticed that the cowl, the upwardly extending louvers 15, the upper edge of the instrument board and the plate 17 all constitute a continuous ventilator.

The plates 17 may be secured at their rear edges to the instrument board and be so disposed as to guide forwardly the air that passes in through the openings 18 formed by bending up the louvers 15, the preferred shape in plan of these plates being indicated in dotted lines in Fig. 3. The air that enters flows in the direction indicated by the arrows in Fig. 1, drives out the hot air that would normally accumulate beneath the cowl just back of the dash and hood. The feet of the persons on the front seat of a motor vehicle are usually surrounded by warm air, a condition absolutely avoided by the construction illustrated in the drawings. If the ventilator openings are at the ends of the rail, they can be so proportioned that sufficient air can pass between them to ventilate the space just above and to the rear of the instrument board.

When the lower edge of the wind-shield 12 contacts with the upper edge of the dam 16, neither wind nor rain can pass through between them or pass down through the openings 17. It has been found that in many cases, air rushes between the wind-shield and rail and down over the instrument board against the knees of those riding on the front seat, chilling the upper portions of the legs while the feet are too hot. Usually, when the wind-shield is swung back sufficiently to deflect air downwardly into the body, the amount of air thus deflected and its speed is sufficient to disarrange the clothing of women riding on the front seat, but by deflecting the air by means of the present invention, this inconvenience is eliminated.

Referring now to Fig. 5, it will be noticed

that the cowl 7, rail 8, dam 16, and louver 15 are similar to those shown in Fig. 1, but that the instrument board 21 has an inclined extension 22, on which the rear edge of the fuel tank 23 may rest, the forward edge of the tank being mounted on a bracket 24 on the dash 5. This tank usually does not extend entirely across the car and air may therefore pass around its ends. But the greater proportion of the air will pass down across the tank to the dash and to the foot board, thus keeping cool the fuel tank and the feet of the passengers. In this construction, the top of the tank is a deflector.

In Fig. 6, the construction is similar to that of Fig. 1, with the single exception that the louvers 15 are omitted, the wind-shield being relied upon to deflect the current of air through the opening 26 in the rail 8.

When the rail is so narrow that openings and louvers are not possible or desirable, the construction shown in Fig. 7 may be employed. The bolts 26′ that secure the dam 16 to the rail 28 may be provided with spacing sleeves 29 and nuts 30 to properly position the deflector 31. In this construction, the wind-shield is positioned to prevent any great amount of air from passing above the deflector 31 and to compel a strong current to enter the space between the rail and deflector and pass downwardly and forwardly to the space immediately in the rear of the dash.

It will be apparent that many other changes can be made in the details of this invention without departing from the spirit thereof.

I claim:—

1. A ventilator for the front ends of the bodies of motor vehicles provided with wind-shields suspended from horizontal axes comprising a downwardly and forwardly inclined plate just below the rear portion of the cowl and an upright plate at the rear edge of the inclined plate, the upper edge thereof being rearwardly of a forward lower edge of the wind-shield.

2. A ventilator for the front ends of the bodies of motor vehicles, comprising the rear portion of the cowl, a rail at the rear end thereof, a windshield mounted on the body, a dam mounted on the rail, and plates extending below the cowl and up to the horizontal plane of the rail and back of the vertical plane of the rail, thus leaving an inlet opening into which air may be conducted by the wind-shield.

3. In combination, a vehicle body comprising a cowl, a dam arranged adjacent the rear end thereof, a windshield mounted on the body with its lower edge rearwardly of said dam, said cowl having a port arranged therein rearwardly of said dam, and a downwardly and forwardly extending deflector plate arranged rearwardly of said port.

4. A ventilator for the front ends of the bodies of motor vehicles comprising louvers projecting upwardly from that portion of the body just below the wind-shield and extending parallel to the lower edge thereof, said body having a slot just in advance of said louvers, and a deflector extending downwardly and forwardly from the bottom of the louvers.

5. A ventilator for causing a current of air to flow to the front end of a motor vehicle below the sheet metal cowl thereof, formed by slitting the rail of the cowl parallel to the wind-shield and bending up the metal at the rear of the slit, a plate extending downwardly and rearwardly from said bent up portion of the cowl, and another plate connected at its rear edge to said first named plate and extending downwardly and forwardly below the cowl to deflect currents of air that enter through the slit, forwardly below the cowl.

6. In an automobile, the combination with the cowl, a horizontal rail extending transversely of the body of the automobile at the upper rear edge of the cowl, posts extending upwardly at the ends of the rail, a wind-shield horizontally pivoted between the posts, a rubber dam secured to the rail and adapted to contact with the lower edge of the wind-shield, said rail being formed with a longitudinal slot, an instrument board extending downwardly and rearwardly from said rail, a louver extending upwardly at the rear edge of the rail adjacent said slot. and a plate secured at its rear edge to said instrument board just below the slot and extending downwardly and forwardly just below the cowl.

7. In combination, an automobile body, a windshield adjustably mounted on the body, and a downwardly and forwardly extending air conduit mounted on the body and having its inlet opening rearwardly of the forward lower edge of the windshield when in closed position, said windshield being adapted to control the flow of air through said conduit.

8. In combination, an automobile body including a dash and cowl, a wind-shield mounted above the body to swing about a horizontal axis at its upper edge, and a conduit associated with the wind-shield and with the cowl of the body, when the wind-shield is swung rearwardly to direct air downwardly and forwardly from the rear edge of the cowl.

9. In combination, a vehicle body, a windshield mounted thereon, a dam mounted on said body forwardly of the lower edge of said windshield, and a deflector plate

mounted rearwardly of said dam and spaced therefrom, to form an air conduit therebetween whereby movement of said windshield toward or from said dam controls the flow of air through said conduit.

In testimony whereof I sign this specification in the presence of two subscribing witnesses.

LYLE K. SNELL.

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