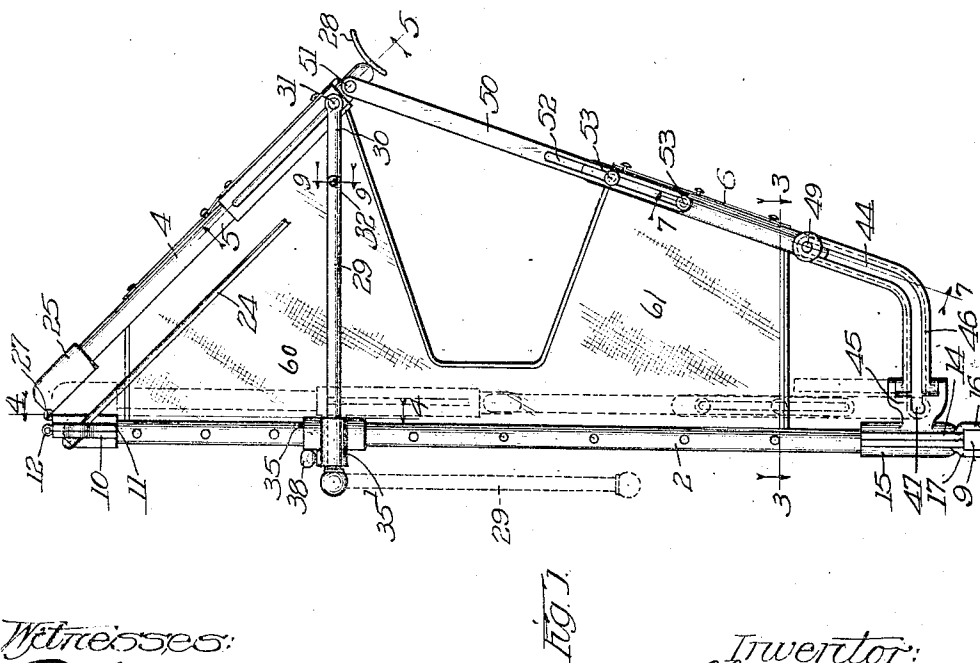
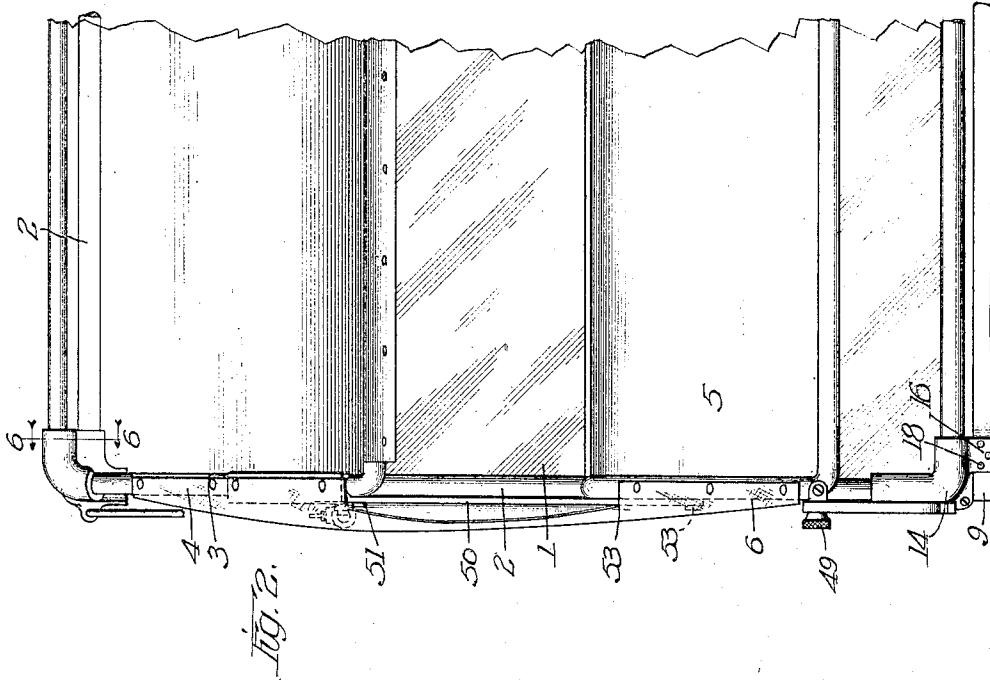


1,050,524.

2 SHEETS—SHEET 1.



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C. O. DOAN.
WIND SHIELD FOR VEHICLES.
APPLICATION FILED MAR. 4, 1911.

1,050,524.

Patented Jan. 14, 1913.

2 SHEETS—SHEET 2.

Fig. 3.

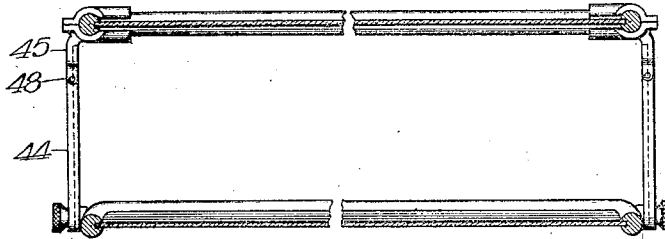


Fig. 4.

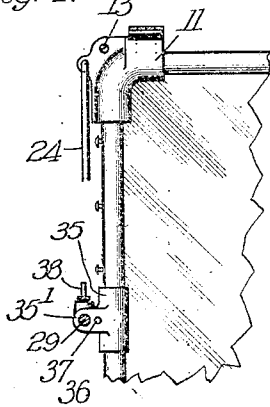


Fig. 5.

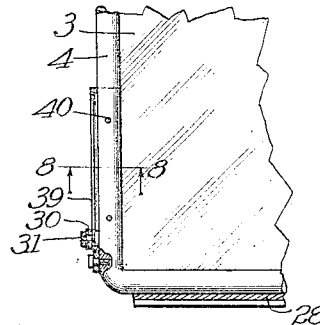


Fig. 8.

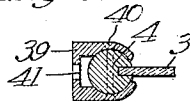


Fig. 9.

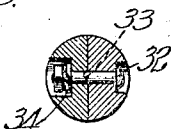


Fig. 10.

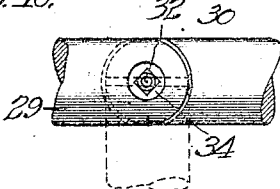


Fig. 6.

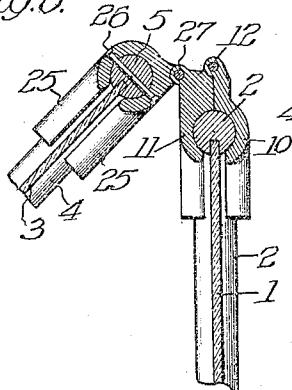
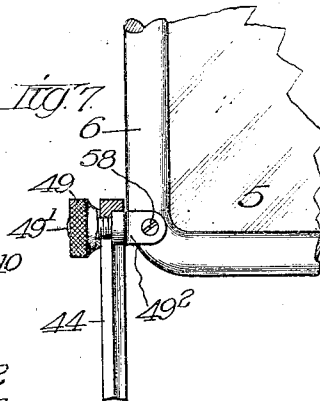


Fig. 7.



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UNITED STATES PATENT OFFICE.

CHARLES C. DOAN, OF CHICAGO, ILLINOIS.

WIND-SHIELD FOR VEHICLES.

1,050,524.

Specification of Letters Patent.

Patented Jan. 14, 1913.

Application filed March 4, 1911. Serial No. 612,344.

To all whom it may concern:

Be it known that I, CHARLES O. DOAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Wind-Shields for Vehicles, of which the following is a description.

My invention relates to that general class of devices known as wind or storm shields or the like, and relates particularly to a shield for use upon vehicles such as automobiles, street cars or the like, and is in the nature of an improvement and modified form of device from that shown and described in Letters Patent of the United States, granted to me on November 29, 1910, No. 977,174.

The present shield is particularly adapted to be applied to vehicles, provided with a vertically extending wind shield, or to street cars provided with a closed front, the same being provided with means for readily attaching and supporting the same in position. The invention has among its objects the production of a simple, convenient, efficient and satisfactory shield of the kind described for use wherever found applicable.

To this end my invention consists in the novel construction, arrangement and combination of parts herein shown and described, and more particularly pointed out in the claims.

In the drawings, wherein like reference characters indicate like or corresponding parts: Figure 1 is a side elevation of my improved form of device including the usual automobile wind shield, curtain on the near side removed. Fig. 2 is a front elevation of a portion of the same. Fig. 3 is a sectional view taken substantially on line 3, 3 of Fig. 1. Fig. 4 is a sectional view taken substantially on line 4, 4 of Fig. 1. Fig. 5 is a sectional view taken substantially on line 5, 5 of Fig. 1. Fig. 6 is a sectional view taken substantially on line 6, 6, of Fig. 2. Fig. 7 is a sectional view taken substantially on line 7, 7 of Fig. 1. Fig. 8 is a sectional view taken substantially on line 8, 8, of Fig. 5. Fig. 9 is a sectional view taken substantially on line 9, 9 of Fig. 1, and Fig. 10 is a side elevation of the hinge shown in Fig. 9.

Referring to the drawings, the shield comprises suitable panels 1, 3 and 5 of glass or other suitable material, provided with

frames 2, 4 and 6, respectively. In the drawings I have shown my invention as applied to and including one form of wind shield 1, provided with its frame 2 suitably mounted upon the dash-board 9, it being understood that the vertically extending shield 1 may be the shield that is already affixed to the vehicle, or a shield furnished with my parts. Secured to the upper corners of the frame 2 of the shield 1 are clamps made up of parts 10 and 11, pivotally secured together or hinged at 12, which are closed over the corners and then locked in position by means of screws 13 (see Fig. 4) or their equivalents. Secured at the lower corners are clamping members 14 and 15, which are secured together similar to the top clamps. When the wind shield 1 is not already applied to the vehicle, the clamps 14 and 15 may be provided with extending parts 16 and 17 arranged to clamp or secure the vertical frame to the dash-board 9, 18 being screws or bolts for holding the parts together. On each side of the vehicle may be arranged a rod 24 for bracing the vertical shield. These rods are commonly used, and where the whole shield shown, including the vertical shield, is to be fixed on the vehicle, they may be secured to the brackets 10, 11. However, it should be understood that they may be attached to the frame of the vertical shield in any manner, and where with a vertical shield is already in use need not be interfered with.

Pivotally secured to the upper part of the vertical shield, as shown to the clamp part 11, is a diagonally extending panel or shield 3, provided with a suitable frame 4, the pivotal connection permitting the shield to be turned substantially into the position indicated in Fig. 1, or to drop into the dotted position shown in the same figure. As shown, each of the upper corners of the diagonally extending upper shield is provided with a bracket 25 secured by pin 26, or its equivalent, the bracket embracing the frame. The brackets 25 are each pivotally secured or hinged at 27 to the proximate corner brackets on the vertical shield. The shield 3 may be maintained in the position shown, or any desired intermediate position in any suitable manner. As shown, a rod 29, 30 is preferably arranged on each side of the shield, arranged to maintain the shield in the desired open position, or fold or open the same.

For each of the rods 29, 30, I preferably provide a bracket comprising the parts 35, 36, which may be secured to the frame part 2 by screws or bolts 37, or their equivalents.

5 One of the parts, as shown part 35, is provided with an extended part 35', through which the rod 29 passes, a set screw or thumb nut 38, or its equivalent, being provided for locking the rod in the desired position.
10 The opposite end of the rod is secured by a bolt 31 to the frame 4. In the preferred construction the rod is not only pivotally secured to the frame 4, but also slidably secured, so that frame 4 may be closed. A
15 slotted part 39 is secured on each side of the frame 4 by screws 40, or their equivalents, the same being provided with a slot 41, through which the bolts 31 pass. The rod is preferably jointed, or made up of a
20 plurality of parts 29 and 30, so that when the shield is closed the end 29 may be dropped down as indicated in Fig. 1. If desired, however, the rod may be made in one piece. Any suitable connection may be em-
25 ployed between the two parts, as is most clearly shown in Figs. 1, 9 and 10, the two parts are connected by a pin or bolt 32, 34 being a resilient washer. One part is preferably offset as at 33 and the other corre-
30 spondingly grooved so that the spring washer and bolt normally rigidly maintain the parts in position and alinement, but so that the part 29 can be turned down as shown in Fig. 1.

35 The lower panel 5 and its frame 6 are also pivotally secured to the lower end of the vertical shield 1, but this panel is so connected to the shield that it will lie flat against the shield when the panel is closed,
40 or leave an opening between the two when it is open or in operative position.

Referring particularly to Figs. 1, 2 and 7, the brace part 14 is extended out as at 45 and provided with an extension 46 hinged thereto, the two being provided with a continuous slot 44, which is angular in form and preferably slopes slightly downward toward the vertical panel from the bend or angle. It is also preferably pro-
50 vided with a notch, as is clearly shown in Fig. 1, in the lower side at the inner end. The two parts are secured together by pins 48 (see Fig. 3) so that they may be swung into position, as shown in the dotted lines
55 in Fig. 1 when the lower panel is folded. The panel is connected to the slotted connections or supports 46 by suitable bolts by thumb nuts 49. The two panels 3 and 5 are preferably secured together by a bar 50 on
60 each side, which are pivotally secured to the frame part 4 by a screw 51, and to the frame part 6 by pins 53, 53, which extend through the slot 52, forming substantially a pin and slot connection at each side. The shield is
65 preferably provided with a curtain on each

side. Referring particularly to Figs. 1 and 2, 60 and 61 represent the upper and lower parts of the curtain, which is arranged on each side and may be secured to the frames in any desired way. In Fig. 1 the curtain
70 on the far side of the shield is shown, the near curtain being removed, while in Fig. 2 the near curtain is shown.

The manner of applying the device and operation of the same may be briefly de-
75 scribed as follows: Assuming that the panel 1, provided with a frame 2, is secured on the vehicle, the same being suitably supported and maintained in position in any
80 desired way, or a shield to be applied thereto. The brackets or clamps 11, 12 and 14, 15 are secured at the corners at the top and bottom respectively, and the frame 4 is pivotally supported by the brackets 25, and the
85 frame 6 by the angular slotted supports 46, the brackets 35 being secured in position as shown. If the rod 29, 30 is drawn in as indicated in Fig. 1 of the dotted lines, the parts
90 of the shield will fall or be drawn into the positions shown in the dotted lines, and the supports 46 may then be folded or closed. When it is desired to use the shield, the
95 brackets 46 may be turned into position and the rod 29, 30 pushed out so that the parts 4 and 6 are thrown substantially into the positions indicated in Fig. 1, or to intermediate
100 positions. It is understood, of course, that this position may be such as may be desired, the same being controlled by operating the rod 29. When the parts are as desired they
105 may be locked in that position by means of the thumb nuts 38. As the part or frame 4 is turned the connecting bars 50 raise the frame 6 into proper position, after which, if desired, the thumb nuts 49 may be tight-

ened.
If the vehicle is not provided with shield 1, the shields 3 and 5 may be applied to a vertical shield substantially similar to that
110 shown, and the same may then be mounted upon the vehicle. In this case, where the complete shield is furnished, the clamps 10, 11, may be bolted or screwed on the frame 1, the hinged clamping parts being a particu-
115 larly convenient arrangement where a vertical shield is already on the vehicle. In this case the parts may be assembled by the purchaser, using the old shield with practically only the usual or common tools and without
120 requiring a skilled mechanic.

In the case of a street car or similar vehicle, the bracket parts 11 may be suitably secured directly to the front of the car, as
125 may also be the parts 14. In this case the rod 29 could be extended through the front wall of the car and the position of the wind shield be controlled directly by the motor-
130 man from within the car. It is of course understood that in the place of the bar 32, 30, arms similar to those shown in my pat-

ent mentioned may be employed for each diagonal extending shield, and the same may be secured to the shield frame 2 substantially similar to the attachment here shown and described.

The action of the shield when in use is substantially similar to that shown and described in my patent mentioned, the herein described shield, however, being somewhat more efficient and more convenient, as well as applicable for use on vehicles already provided with the vertical shield. The vertical shield is kept clear from dirt or moisture in bad weather by the air currents passing through the opening between the diagonally extending panels and down between the lower end of the vertical and lower panel. In other words the sleet, snow, rain or dirt is carried down by the air currents, the driver, however, having a clear and ample range of vision. It will thus be seen that I have a shield that is applicable for any type of vehicle, that the shield parts may be readily applied or removed from the vertical shield, that the same may be folded with practically no extending parts, and that the position of the adjustable panels may be quickly and conveniently adjusted from within the vehicle.

Secured in any suitable manner adjacent the upper portion of the opening which is provided between the upper and lower shield members when the same are in operative position, and in front thereof, is a curved deflector 28 which extends transversely of said opening and is curved downwardly and inwardly, so as to deflect to a large extent the passage of wind and rain through the opening between the shield members.

Having thus described my invention, it is obvious that various immaterial modifications may be made in the same without departing from the spirit of my invention. Hence I do not wish to be understood as limiting myself to the exact form, arrangement or combination of parts herein shown and described, or uses mentioned.

What I claim as new and desire to secure by Letters Patent is:—

1. In a device of the kind described, the combination of a vertical wind shield, a pivotally supported panel extending diagonally downward and outward from the upper part of said shield, a lower panel having its lower edge spaced from the vertical shield near its lower end, and extending diagonally upward and outwardly, means for supporting said lower panel including a plurality of brackets and a slot and pin connection between said panel and brackets, and a connection between said upper and lower panels whereby they may be adjusted simultaneously.

2. In a device of the kind described, the

combination of a vertical wind shield, a pivotally supported panel extending diagonally outward and downward from the upper part of the shield, a lower panel arranged proximate the lower edge of said vertical shield, and means for supporting and guiding the lower edge of said panel including a plurality of brackets projecting forwardly from the lower portion of the vertical wind shield, each bracket provided with an angular slot therein and a pin for each bracket extended through said slots and secured to the lower panel.

3. In a device of the kind described, the combination of a vertical wind shield, a panel adjustably secured to the upper edge of the vertical shield, a lower panel adjustably secured to the lower edge of said shield and connecting means between the free edges of said panels on each side thereof whereby said panels may be adjusted together.

4. In a device of the kind described, the combination of a vertical wind shield, a panel extending diagonally downward and outward from the upper part of said shield, means for pivotally securing said panel to said shield, means for controlling the position of said panel, a lower panel and supporting means therefor, said panel adjustable both horizontally and vertically, and connecting means between said panels arranged on each side and connecting the free edges thereof whereby said panels may be adjusted together.

5. In a device of the kind described and in combination, a vertical wind shield, a panel hinged to the upper part of said shield and extending diagonally downward and outward from the upper part of the shield, a lower panel positioned near the lower edge of said vertical shield and extending diagonally upward and outward, connecting means between the free ends of said panels, and means for guiding the lower edge of said lower panel, whereby the same may be adjusted substantially horizontally and vertically.

6. In a device of the kind described and in combination, a vertical shield, a panel secured to the upper edge of said shield and extending diagonally downward and outward from the upper end thereof, a lower adjustable panel, means for supporting said lower panel when open, and means for supporting said lower panel when closed, said last mentioned supporting means arranged to guide the lower edge of the panel during the opening thereof and maintain the same with its lower edge spaced from the vertical shield when the panel is supported by said first mentioned supporting means.

7. In a device of the kind described and in combination, a vertical shield and means for supporting the same, upper and lower

shield members extending from the upper and lower portions of said vertical shield, a plurality of brackets arranged proximate the lower edge of said shield, each of said brackets provided with a slot therein extending outwardly from the shield and thence upwardly, said lower shield member being provided with a pin on each side thereof extending through the slot in the adjacent bracket, and means for supporting the lower shield member when the pins are in the upwardly extending part of said slot.

8. In a device of the kind described and in combination, a vertical shield and means for supporting the same, upper and lower shield members extending from the upper and lower portions of said vertical shield member, a plurality of brackets arranged proximate the lower edge of said shield, each of said brackets provided with an angular slot therein extending outwardly from the shield, and thence upwardly and outwardly, said lower shield member being provided with a pin at each side thereof extending through the slot in the adjacent bracket, and means for supporting the lower shield when the pins are in the upwardly extending parts of the slots, including a connection extending from the lower shield member to the upper shield member.

9. In a device of the character described, the combination with a vertical wind shield, a panel extending downwardly and outwardly from the upper portion of said wind shield and adjustably connected thereto, a panel extending upwardly and outwardly from the lower portion of said vertical shield and adjustably connected thereto, a connection between said panels whereby they may be simultaneously shifted, and an operating member for shifting said panels.

10. In a device of the kind described and in combination, a vertical shield, a plurality of brackets arranged proximate the lower edge of said shield, each of said brackets provided with a slot therein extending outwardly from the shield and thence upwardly, each of said brackets hinged at a point between the ends of said slots, a panel provided with a pin on each side thereof extending through the slot in the adjacent bracket, and means for supporting the panel and guiding the upper end thereof when the pins are in the upwardly extending part of said slots.

11. In a device of the kind described and in combination, a vertical shield and means for supporting the same, a panel secured to the upper edge of said shield and extending diagonally downward and outward from the upper end thereof, a plurality of brackets arranged proximate the lower edge of said shield, each of said brackets provided with an outwardly and upwardly extending

slot therein, a panel provided with a pin on each side thereof near the lower edge thereof, extending through the slot in the adjacent bracket, and a connecting bar on each side of said panels, secured proximate the lower edge of the upper panel and the upper edge of the lower panel.

12. In a device of the kind described and in combination, a vertical shield and means for supporting the same, a panel secured to the upper edge of said shield and extending diagonally downward and outward from said upper edge, a plurality of brackets arranged proximate the lower edge of said shield, each of said brackets provided with a slot therein, a panel provided with a pin on each side thereof near the lower edge thereof, extending through the slot in the adjacent bracket, a connecting bar on each side of said panels, secured proximate the lower edge of the upper panel and the upper edge of the lower panel, and means for controlling the position of said upper panel.

13. In a device of the kind described and in combination, a vertical shield and means for supporting the same, a panel clamped to the upper edge of said shield and extending diagonally downward and outward from the upper end thereof, a plurality of brackets arranged proximate the lower edge of said shield and clamped thereon, each of said brackets provided with an outwardly and upwardly extending slot therein, a panel provided with a pin on each side thereof near the lower edge thereof, extending through the slot in the adjacent bracket, a connecting bar on each side of said panels, secured proximate the lower edge of the upper panel and the upper edge of the lower panel, and means extending to the rear of said shield for controlling said panels or maintaining the same in the desired positions.

14. In a device of the kind described and in combination, a vertical shield and means for supporting the same, a panel hinged proximate the upper edge of said shield, a panel arranged proximate the lower edge of said shield and having its lower edge adjustably connected with the shield, connecting means between the lower edge of the upper panel and the upper edge of the lower panel, and means for maintaining said panels in the desired position relative to the shield.

15. In a device of the kind described and in combination, a vertical shield and means for supporting the same, a panel hinged proximate the upper edge of said shield, a panel arranged proximate the lower edge of said shield and having its lower edge adjustably connected with the shield, connecting means between the lower edge of the upper panel and the upper edge of the lower

panel, and a controlling rod connected with one of said panels extending to the rear of the shield.

16. In a device of the kind described and in combination, a vertical shield and means for controlling the same, a panel hinged proximate the upper edge of said shield, a panel arranged proximate the lower edge of said shield and having its lower edge adjustably connected with the shield, connecting means between the lower edge of the upper panel and the upper edge of the lower panel, and a rod made up of a plurality of parts pivotally joined together, said rod pivotally and slidably secured to the upper panel, and extending to the rear of said shield, and means for locking said rod in the desired position.

17. In a device of the kind described and in combination, a vertical shield, a plurality of clamps arranged at the upper corners of said shield, a panel hinged at one edge to said clamps, a plurality of brackets arranged proximate the lower edge of said shield, and means for clamping said brackets to the shield, each of said brackets provided with an angular slot therein, a panel having a pin on each side thereof extending through the slot in the adjacent bracket, a bar pivotally secured to the upper panel on each side thereof and slidably connected with the lower panel on each side thereof, and means

for controlling and locking said panels in the desired position.

18. In a shield of the character described, 35 a main vertical shield, an auxiliary shield member, and supporting means for said auxiliary shield member including brackets projecting forwardly from the main shield member and hinged intermediate their ends, 40 whereby the free ends of said bracket members may be swung to position alongside of said main shield, and members carried by said auxiliary shield member and slidably engaging said brackets. 45

19. In a device of the character described, a vertical wind shield, a panel extending downwardly and outwardly from the upper portion of said wind shield, a panel extending upwardly and outwardly from the lower 50 portion of said wind shield, the adjacent edges of said panels being separated to provide a space therebetween, and a deflector plate positioned in front of the upper portion of the opening between said panels and 55 extending transversely thereacross.

In testimony whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

CHARLES O. DOAN.

Witnesses:

ROY W. HILL,
CHARLES I. COBB.