Oct. 26, 1926. 1,604,760

E. G. SIMPSON

CLEAR VISION SLIDING SHIELD

Filed March 26, 1925 3 Sheets-Sheet 1

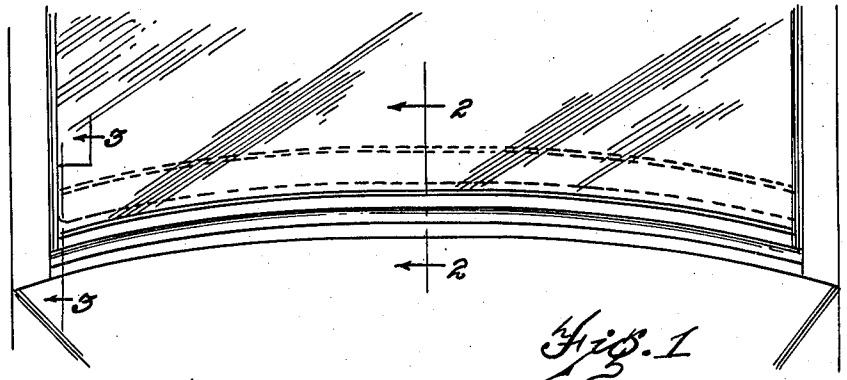


Fig. 1

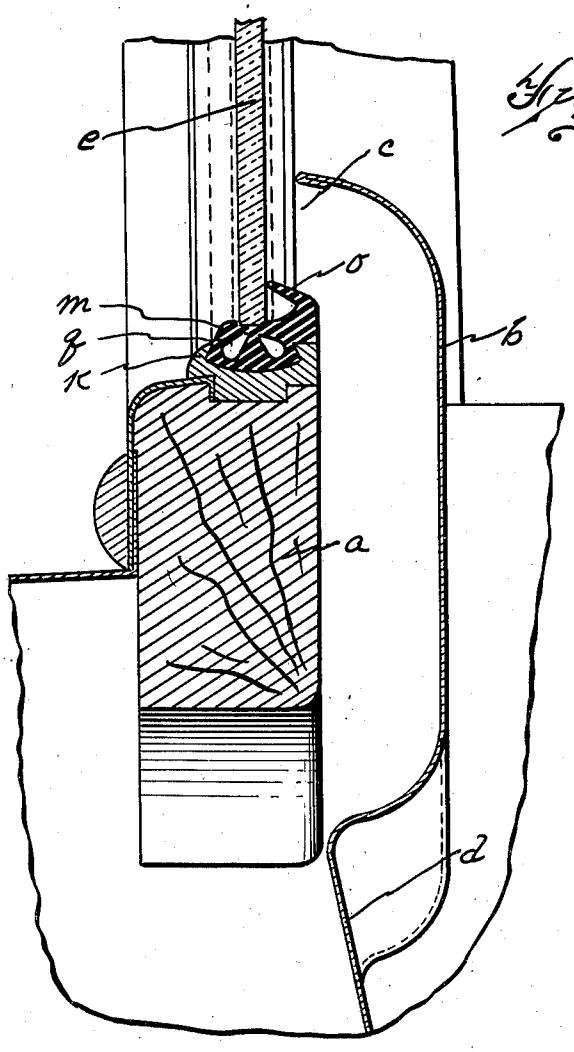


Fig. 2

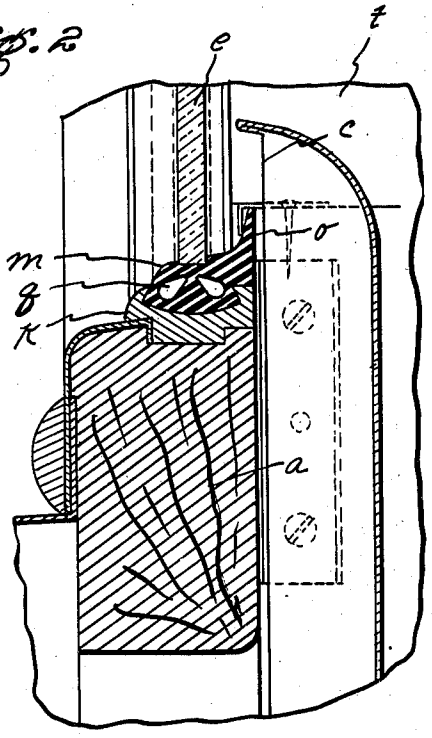


Fig. 3

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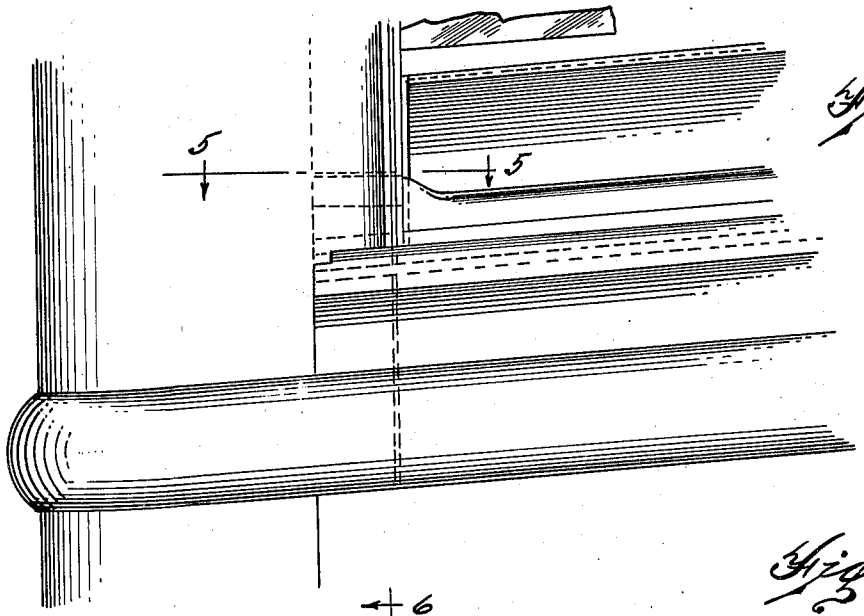
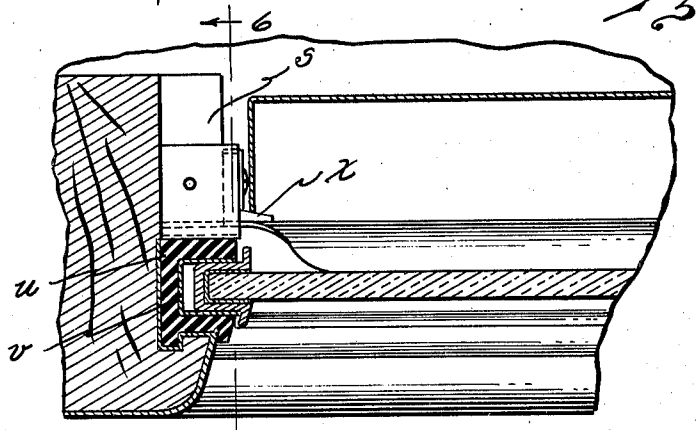


Fig. 4

Fig. 5



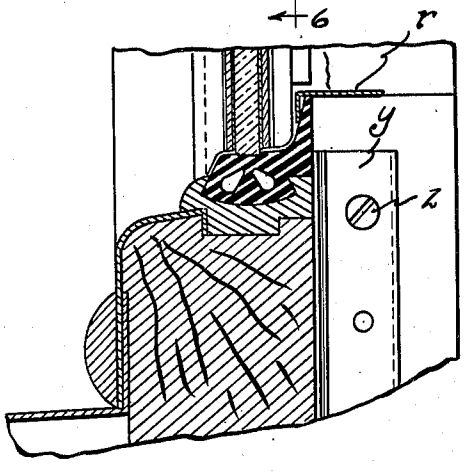


Fig. 6

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CLEAR VISION SLIDING SHIELD

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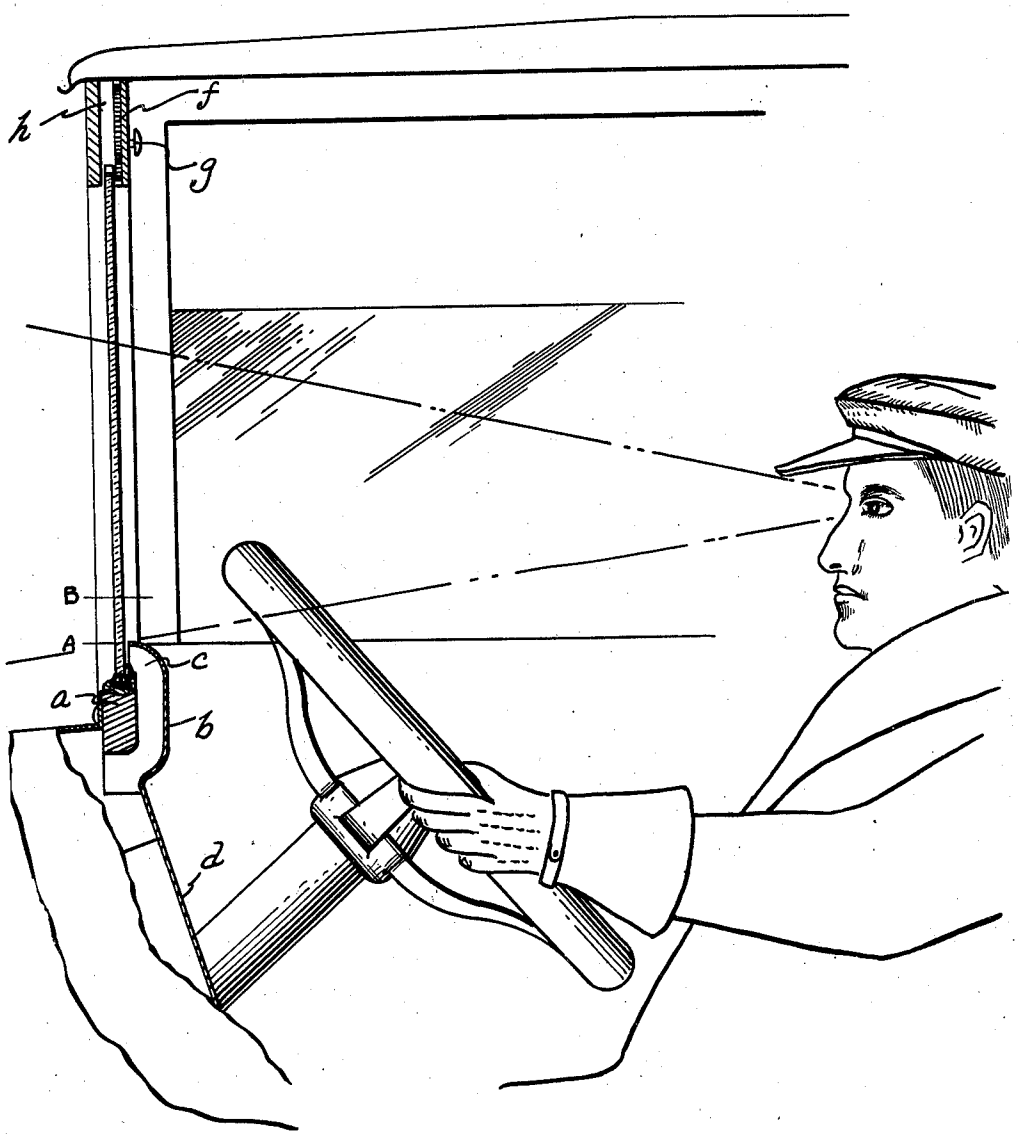


Fig. 7

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Patented Oct. 26, 1926. 1,604,760

UNITED STATES PATENT OFFICE.

EMORY GLENN SIMPSON, OF DETROIT, MICHIGAN. ASSIGNOR TO FISHER BODY CORPORATION, OF DETROIT, MICHIGAN, A CORPORATION OF NEW YORK.

CLEAR-VISION SLIDING SHIELD.

Application filed March 26, 1925. Serial No. 18,387.

This invention relates to windshields. It is the object of the present invention to provide a windshield of the single-panel, vertical sliding type which will present absolutely no obstruction to the vision.

One of the chief objections to the double panel shield is the rubber strip that is ordinarily used between the meeting edges of a two-panel shield. Such a strip is shown and described in detail in the McCormick Patent No. 1,259,117.

A single panel, vertical sliding, clear vision shield of this type is described and claimed in the prior Simpson application Serial No. 686,716. This shield has gone into very extensive use, but it is not an absolutely clear vision shield when the same is raised; for like all windshields, and all windows used in automobiles, it does have a window sash channel for seating the same on the sill, consequently when the shield is raised for the purpose of getting direct ventilation, the sash bar interferes with the line of vision; this will be more fully explained hereinafter.

Furthermore, in this new type of ventilating windshield, which is known as "Fisher V V type," it has been found a very difficult thing to get an absolutely water-tight seal around the sill.

It is the object of the present invention to effect two special results; one is to eliminate the obstruction to the vision when the shield is raised, the other to secure, as near as may be, a water-tight seal at the sill.

In the drawings:

Fig. 1 is a fragmentary elevational view of a portion of the shield looking back from the cowl.

Fig. 2 is a section on the line 2—2 of Fig. 1.

Fig. 3 is a section on the line 3—3 of Fig. 1.

Fig. 4 is a fragmentary elevational view of the shield adjacent to one corner of the frame. This is an enlarged view looking toward the shield from the front of the car; the panel is partly raised.

Fig. 5 is a section on the line 5—5 of Fig. 4.

Fig. 6 is a section on the line 6—6 of Fig. 5.

Fig. 7 is a vertical section, fragmentary in character, through the forward part of the car, showing the driver in position and indicating how the shield would interfere with the line of vision in case it had the usual lower sash channel.

As explained in the prior Simpson application, the sill *a* of the windshield has a trough *b* fitted across the entire length of the sill, this trough is bent to direct an air current entering the mouth *c* of the trough, down behind and forward of the instrument board *d* of the car. This serves as a foot ventilator and entirely eliminates the necessity of the usual cowl ventilator which will be seen on most cars; it will be noted that no such ventilator is shown in Fig. 1. The mouth of this ventilating draft is controlled by raising and lowering the single panel shield *e*, which may be raised and lowered by a regulator *f* controlled by a handle *g*. The details of this regulator are not here shown as they are described in the prior Simpson application, and also in the Simpson application Serial No. 702,753.

The first inch or so of the rise in the panel serves to control the amount of air which is delivered through the ventilating trough, and forward of the instrument board. The panel may be raised still further, about 3 or 4 inches, by reason of the pocket *h* in the header. This gives a direct draft into the car. This window regulator is controlled by the usual clutch, after the manner of all window regulators, consequently the panel stays locked in any position to which it has been moved by the regulator.

In these prior applications, the single panel has been provided with the usual sash channel which is employed on all windshield panels, on the lower edge, when they seat on the sill. It is the object of the present invention to completely eliminate this channel and afford a sliding panel with a free edge, and at the same time effect a very tight water seal.

To this end, the sill is grooved and in this groove is located a relatively heavy strip

of metal designated *k* and which is preferably an extruded soft metal strip,—aluminum or aluminum alloy. This can be easily bent and shaped to the curvature of the sill from side to side as it appears in Fig. 1.

This extruded metal strip is provided with a dovetail socket in its upper face. In this socket is secured the rubber sill strip *m*. This sill strip *m* is constructed of moulded extruded rubber and preferably has a pair of hollows *q* which serve to make it easily deformable; an extension of this rubber strip on the inside runs over the dovetail on the inside and seats on the top of the metal strip. There projects forwardly from this portion of the rubber, a weather fin *o;* this is intended to just about meet the glass; in some cases it may wipe the glass slightly and in others it may have a slight clearance from the glass. It is impossble in the assembly work to work to such dimensions as to insure an absolutely certain position of this fin at all times. However, it is the object of this fin to substantially seal the glass above the main portion of the strip from water that may be blown through where the glass rests on the cushion portion of the strip.

It will be seen from this description that the purpose of this rubber strip is two-fold; one is to form a springy soft cushion to receive the unframed edge of the glass, and enable the builder to do away with the universally present sash channel. The hollow rubber will serve as an ample protection for the bottom edge of the glass, especially is this true in view of the window regulator with a lock such as described in the Simpson-Schmidt-Carstons Patent No. 1,343,410, which locks the window against either raising or falling. It will be apparent therefore, that when the panel has been turned down firmly on the rubber cushion it will be locked in this position by the regulator and the panel cannot jump up and chatter on the sill with the vibrations of the car. This therefore serves for as good a protection for the bottom of the glass as a sash channel, and when the panel is raised to the upper position *b* of Fig. 7, there is no opaque member in the line of vision to interfere with driving.

Now as to some of the other details, it will be seen that the weather fin *o* can be turned up at the corners as shown in Fig. 3, also Figs. 4 to 6 inclusive. The clip *r* which is nailed to the offset *s*, which seats the lower end of the moulding serves to turn back the fin of this rubber strip and causes the same to turn up between the rubber window guide *u* which is preferably felt, velvet lined, as at *v*. This serves to erect at the corner and around the joint with the window guide such a barrier as is calculated to exclude the weather driving in at the corners. This has been the most critical point of this new type of windshield.

It is preferable to also use a vertical angle strip of rubber, designated *x*, and held in place by the metal plate *y* secured to the side of the window post with the screws *z*. This forms an additional weather seal for the corner.

What I claim is:

1. In windshield construction, the combination with a windshield frame provided with a header pocket, an upwardly and downwardly-guided windshield panel provided with a lower free edge, and arranged to fill the windshield frame when the panel is in closed position, a windshield sill, and means on the sill for receiving and cushioning the lower free edge of the panel, when the panel is in closed position.

2. In a windshield, the combination of a windshield frame including a sill, a single panel slidable up and down in the frame and provided with a lower free edge, means on the sill for cushioning the lower free edge of the panel when the panel is in closed position, and a window regulator for raising and lowering the shield and locking it against rising off the cushion by vibration.

3. In windshield construction, the combination of a windshield frame provided with a sill, a single panel operating in said frame, a strip supported on the sill and of a soft distortable material, the said panel having a lower free edge adapted to be received on the said rubber cushion, when the panel is in position to close the opening in the windshield frame, and a window regulator for operating said panel and locking same in various positions of adjustment.

4. A windshield panel, comprising a frame provided with a sill, a single panel slidable up and down in said frame and having a lower free edge, a cushion of distortable material seated on the sill and arranged to receive the lower free edge of the panel and also seal the same in water-tight relation, the said panel arranged to fill the opening in said frame when the panel rests on the cushion of the sill.

5. A windshield having in combination a windshield panel provided with a sill, a panel slidable up and down in said frame, and a cushion and weather strip of distortable material comprising a top portion adapted to receive the free edge of the panel and cushion the same and provided with a portion that extends to the side and returns in the form of a weather fin, preventing additionally the entry of the weather.

6. A windshield, comprising a frame having a sill portion, a panel slidable up and down in the frame and having a lower free edge, a metal strip secured to the sill and having a groove, a hollow rubber strip seated in the groove and adapted to receive the

lower free edge of the glass and cushion the same.

7. A windshield, comprising a frame having a sill portion, a panel slidable up and down in the frame and having a lower free edge, a metal strip secured to the sill and having a groove, a hollow rubber strip having a body portion adapted to seat the lower free edge of the glass and having a portion extending at the side and returning in the form of a weather fin to additionally exclude the weather.

In testimony whereof I have affixed my signature.

EMORY GLENN SIMPSON.