March 15, 1938. E. P. ATWOOD 2,111,350

CLEAR VISION SHIELD

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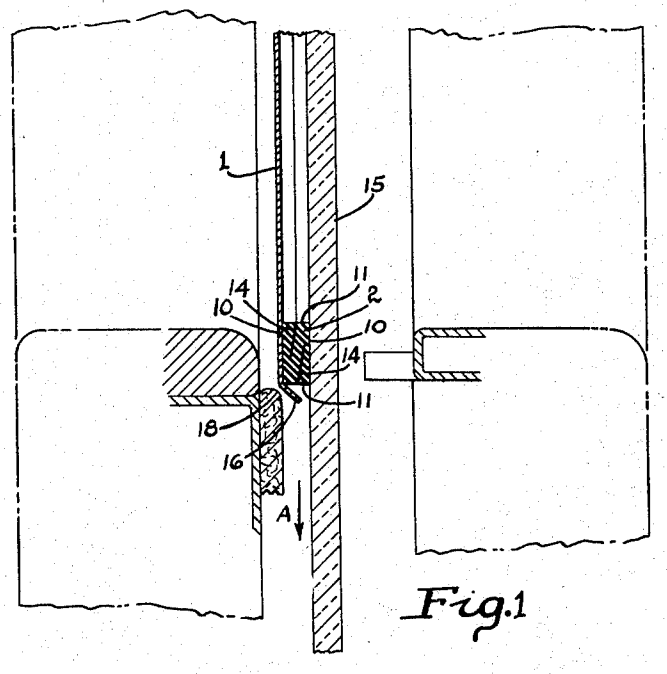


Fig.1

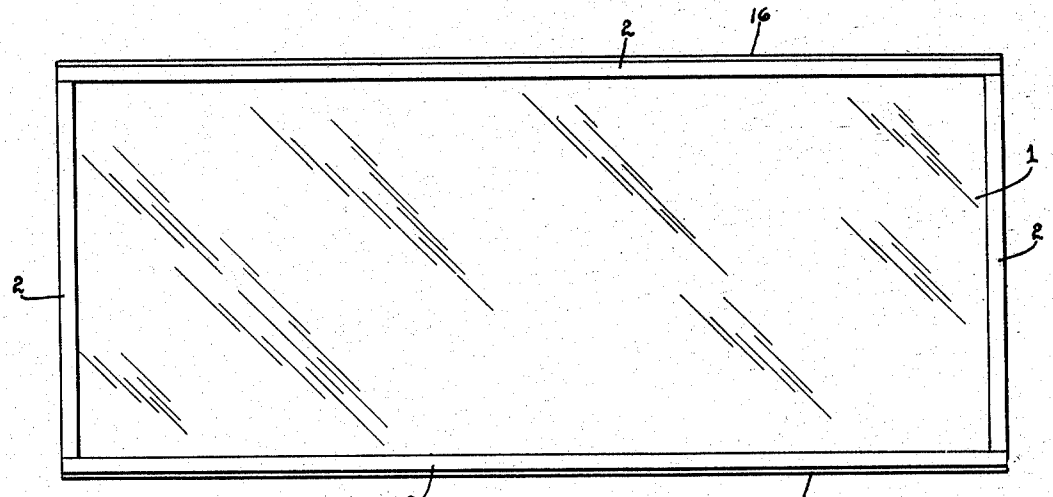


Fig.2

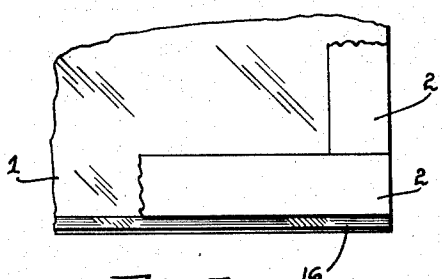


Fig.3

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CLEAR VISION SHIELD

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6 Claims. (Cl. 20—40.5)

This invention relates to improvements in clear vision shields of the dead-air-space type ordinarily used on automobiles, and is particularly directed to a device for use on a sliding window, the main object being to protect the shield attaching and sealing means against unsealing or loosening, incident to the raising or lowering of the window.

Some shields are composed of a sheet of glass held by a marginally disposed continuous spacer-strip of suitable material interposed between the glass and the window, and sealingly connecting the glass to the window to provide a dead-air-space. When the device is applied to a window and the window is lowered, for example, the lower edge of the glass or of the bottom part of the connecting strip generally engages some part of the window structure, and is torn off or loosened so that the sealed relation is disturbed. The present device provides means whereby this seal is maintained under all conditions of operation.

Features of the invention include: the use of Celluloid in the construction of the clear vision shield, and to the formation of a wedging flange on, or as an integral part of the Celluloid, or on other suitable transparent material either integrally or otherwise.

Features of the invention additionally include all details of construction, along with the broader ideas of means inherent in the disclosure.

Objects, features and advantages of the invention will be set forth in the description of the drawing forming a part of this application, and in said drawing

Figure 1 is a vertical transverse section of a window structure having the usual glass, and showing my invention applied thereto;

Figure 2 is an outer face view of the shield, as an article of manufacture; and

Figure 3 is an inner face view of a part of the article of Figure 2.

In the drawing, numeral 1 indicates a strip of Celluloid or other suitable relatively thin transparent material. The sealing and spacing strips 2 may be of any preferred kind, but are preferably of the type shown in Walz application Serial Number 81,480. The construction of this rectangular strip is best shown in Figure 1. It has two opposite faces 10 of greatest area and two other faces 11 of less area. The outer face 10 is secured by suitable adhesive, not shown, to the transparent element 1, and the inner face 10 is ordinarily provided with tacky adhesive covered by a strip of Holland cloth or the like. The cloth is pulled off before the shield is applied and application is made by merely pressing the inner side of the strip against the surface of the window glass 15.

The strip 2 is slitted inwardly as at 14 from opposite sides to give a somewhat N-shaped cross-sectional configuration, and is thus so constructed that it can yield sufficiently to relieve pulling strain on the partly wet adhesive, all of which is fully explained in the above referred to Walz application. It is, of course, understood that although this is the preferred form of strip, there is no intention to limit the invention to any particular form of strip, because the needed protection is obtainable whatever the character of the strip.

The main feature of this invention is to provide means for preventing loosening of the strip under conditions of use. In this embodiment of the invention, a transparent element 1 is used and it is provided with an angularly related overhanging portion 16 which is disposed as shown in Figure 1 in relation to the window structure, after the shield has been attached to the window glass 15. One or more overhanging portions may be provided. In this instance, one is provided on each of two opposite longitudinal sides of the element 1, that is on the sides of greatest length, and the sides which lie horizontally when the device is used. The advantage is that the window can be raised or lowered without danger of the strips being loosened by impingement at point 18 of the window structure.

As shown in Figure 1, as the glass moves downwardly in direction of the arrow A, the outer surface of the inclined or wedging portion 16 will, if the window is too tight, wedgingly engage the surface 16, move the window slightly to the right or compress the strip to prevent such strain thereon as will loosen it and break the seal. The same action takes place when the window is raised from its lowermost position, in which case the upper wedging surface 16 will act to prevent loosening of the strip.

Insofar as I am aware, I am the first to provide any means whatsoever for protecting the fastening means of a clear vision shield against loosening due to impact or friction, and I, therefore, do not intend to be limited entirely to the manner of placement of the protecting strip, nor indeed does such means have to form a part of or be mounted on the transparent element 1.

I claim as my invention:

1. A transparent element of sheet material other than glass and means spacing and attaching it to a window element to form a dead air

space between the elements, said transparent element having a guard flange extending outwardly beyond said attaching means and bent toward the window to protect said attaching means against loosening as a result of engagement with a part of a structure in relation to which the window element slides.

2. A sheet of transparent cellulosic material and means spacing and attaching it to a window element to form a dead air space between the elements, said transparent element having a bevel formed by bending the material toward the window said bevel adapted to protect said attaching means against loosening as a result of abutting engagement with a part of a structure in relation to which the window element slides.

3. In combination with a sliding window structure wherein the window element moves within the structure when opened, a transparent element of sheet material and means by which it is spaced from and attached to the window element to form a dead air space between the elements, said sheet having an in-bent portion adapted to protect said attaching means against loosening due to engagement with parts of the structure other than the window during motion of the window.

4. In combination with a sliding window structure wherein the window element moves within the structure when opened, a transparent element and means by which it is spaced from and attached to the window element to form a dead air space between the elements, said transparent element having bent down marginal means adapted to protect said attaching means against loosening due to engagement with parts of the structure other than the window during motion.

5. A frost prevention device for sliding windows of automobiles comprising a sheet of transparent material having angularly related flanges one at each of two opposite sides of the sheet and having spacer attaching and sealing strips arranged adjacent and paralleling and placed inwardly of said flanges, and acting when the device is attached to maintain a dead air space between the transparent material and the window pane to which it is attached, said flanges adapted to act wedgingly to protect said strips against loosening as a result of engagement of the sheet with a part of the structure with reference to which the window slides.

6. A frost shield comprising a sheet of transparent material having marginally secured thereto spacing and attaching elements which when sealingly attached form a dead-air space between the sheet and the glass to which the device is attached, said sheet having its marginal portion projecting beyond the outer face of at least one of said strips and angularly disposed to act as a guard flange, for the purpose set forth.

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