June 4, 1929. C. S. APPLAS 1,715,733

WINDOW CHANNEL

Filed Aug. 27, 1926

Fig. 1.

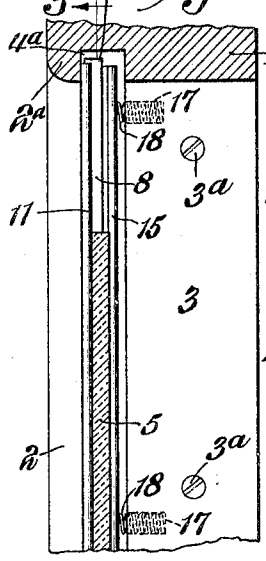
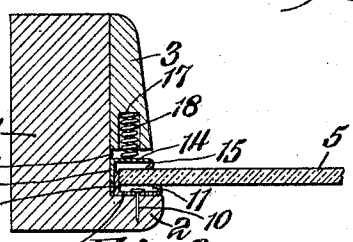


Fig. 2.



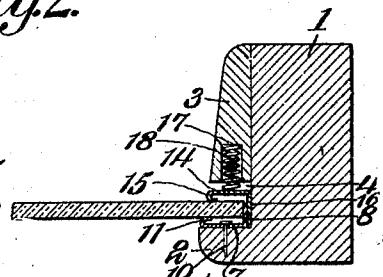


Fig. 3.

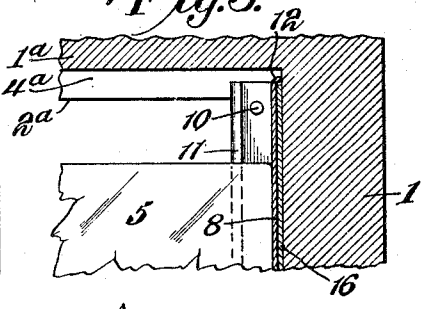


Fig. 4.

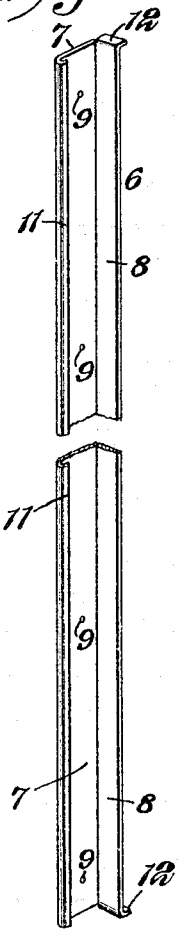
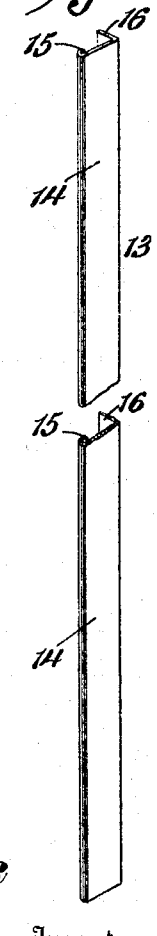
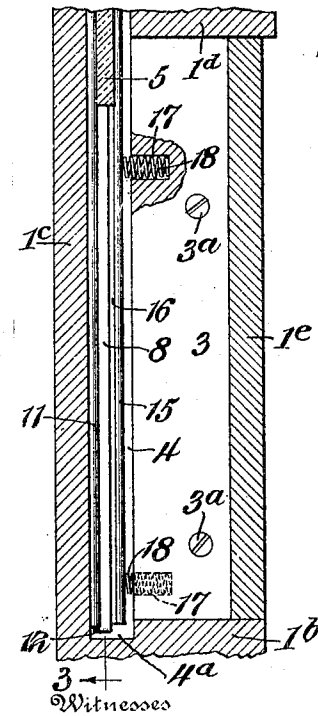
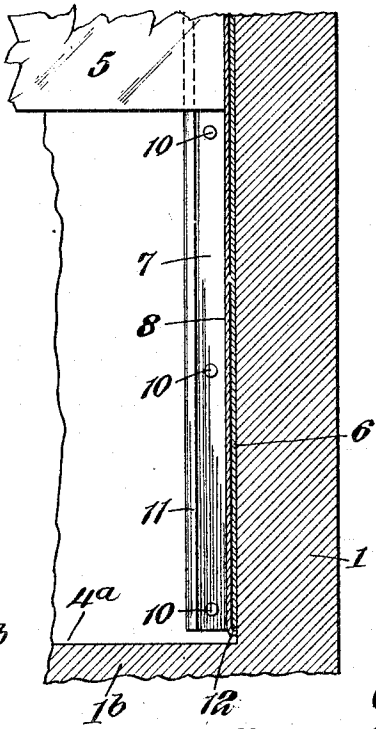


Fig. 5.







Witnesses

C. L. McDonald

Howard D. Orr

Inventor

Clarence S. Applas

By E. L. Siggers

Attorney

Patented June 4, 1929. 1,715,733

UNITED STATES PATENT OFFICE.

CLARENCE S. APPLAS, OF SACRAMENTO, CALIFORNIA.

WINDOW CHANNEL.

Application filed August 27, 1926. Serial No. 131,949.

This invention relates to window channels and more particularly to channels for automobiles, railway carriage or other similar windows.

The object is to provide means to serve as channels at either side of vertically slidable windows whereby the window is prevented from any outward, inward or sidewise movement, during the more or less rough movements of such vehicles, thus eliminating all rattling noises, and at the same time to provide a leak-proof joint that will prevent the entrance of water or currents of cold air.

Another object is to provide a device of this character which may be cheaply manufactured and easily installed in position within the grooves at the sides of window casings, said device including a pair of yieldingly coacting strips of non-corrosive metal which are urged together with sufficient pressure to prevent said rattling or leakage, but which will readily permit the window to be raised or lowered without binding.

A final object is to provide a window channel which may be easily removed in the event a window becomes broken and a new one is to be installed, such removal requiring simply the detachment of the customary detachable stop cleats or strips used in connection with such windows, when the parts of the invention may be easily reached either for installation or removal or for inserting a new window.

A full and complete understanding of the invention may be obtained from a consideration of the following detailed description, taken in connection with the accompanying drawing forming a part of this specification; it being understood that while the drawing shows a practical form of the invention, the latter is not to be confined to strict conformity with the showing thereof, but may be changed or modified, so long as such changes or modifications mark no material departure from the salient features of the invention, as specifically pointed out in the appended claims.

In the drawing, in which similar reference characters designate corresponding parts throughout the several figures:—

Figure 1 is a vertical section through a window and window casing having the improved channel installed therein.

Figure 2 is a horizontal section through the same.

Figure 3 is a vertical section taken on the line 3—3 of Figure 1.

Figures 4 and 5 are detail perspective views of the coacting strips comprising the improved channel.

In the drawing no attempt has been made to illustrate other than what is deemed sufficient to obtain an understanding of the application and use of the invention, and the portions of the window and window casing included in such showing may be taken as indicative of a car or automobile window or other similar window where heavy plate glass is used without a sash frame, though the invention is equally as well adapted for use in connection with windows having such frames.

The usual posts or casing members 1 which form the uprights of an ordinary window casing or the extended side frame members of a car door, etc., are provided on their outer faces with the overhanging beads 2 which may be of integral formation or may consist of detachable strips, in an obvious manner. The top member 1^a of the window casing is likewise provided with a similar bead 2^a, while the lower member 1^b is provided with the upwardly extending front panel 1^c, as in the case of an automobile, said panel extending up to the window sill 1^d, only a portion of which is shown in Figure 1 of the drawing.

Adapted to coact with the side beads 2 are the usual removable stops 3 consisting of vertical strips secured by screws 3^a or otherwise, to the inner faces of the side members 1 of the casing and extending from the top member 1^a to the bottom member 1^b to define a continuous groove 4 between the front edge of the same and the rear edge of said beads 2. In lieu of such stop, the formation is preferably integral in the upper cross member 1^a and the groove 4^a, in said member, is in alinement with the side grooves, as is also the case with the groove 4^a in the bottom member. The lower portion of the stop 3, at either side of the window, where the same extends into the pocket formed between the said front panel 1^c and the inner panel 1^e, may be either a continuation of the upper portion thereof, or the same may be a separate piece, and in the event the plate glass window 5 should become broken and requires replacement, these stop strips 3 may be removed by simply loosening the screws

3ª, after the inner panel 1ᵉ has also been removed, though this feature forms no part of the present invention.

The invention comprises a pair of strips, formed of suitable non-corrosive, non-rusting metal and bent into angular formation to coact with each other, said strips being located in the side grooves 4 of the window casing and extending substantially from the lower, horizontal groove 4ª to the upper, horizontal groove 4ª and adapted to embrace, to cushion and to guide the plate glass window at all times during its upward and downward movements, to prevent breakage of the same and to prevent the entrance of water or air, when the window is closed.

Each pair of strips includes a fixed strip and a movable, pressure strip, the fixed strip 6, shown in detail in Figure 4, being angularly bent, in a longitudinal direction, to form an attaching flange 7 and a perpendicularly disposed flange 8. The attaching flange is provided with a series of spaced apertures 9, for the reception of tacks, nails or other fasteners 10, which securely hold the strip to the inner face of the overhanging bead 2, as clearly shown in Figure 2 of the drawing. This strip may be easily applied in position when the stop strips 3 are removed and it will be noticed that the flange 8 is spaced from the bottom wall of the groove 4, for a purpose to be explained.

The free edge of the attaching flange 7 is provided with a return bend, as indicated at 11, said bend being located on that side adjacent to the perpendicularly disposed flange 8, and the return bend constitutes a bearing bead to contact with the vertical margin of the glass to form a tight joint between the same and, at the same time, to offer the least frictional resistance, during the up and down movement thereof.

At the upper and lower ends of the strip, the flange 8 is slightly extended and bent rearwardly at an angle to form lugs 12, and when the strip is installed in position within the groove, these lugs bear against the bottom wall of the groove and serve to position the strip in proper spaced relation to said bottom wall.

The movable, pressure strip, indicated at 13 in Figure 5 of the drawing, is formed of similar material and bent into angular form to constitute a relatively wide flange 14, whose free edge is bent inwardly to form a coacting return bend or bearing bead 15 adapted to engage, with the minimum amount of friction, the opposite side face of the window 5, in opposition to the aforesaid bead 11, in order to hold the glass from rattling and to aid in the exclusion of air and water.

The other flange 16 of the pressure strip 13 is somewhat less in width and is arranged at right angles to the flange 14, the same fitting, as shown in Figure 2, between the outer face of the aforesaid flange 8 of the fixed strip and the bottom of the groove, such fit being sufficiently loose to permit the pressure strip to move toward and away from contact with the glass window, without binding.

The upper and lower ends of the flange 16 contact with the lugs 12 of the fixed strip and the latter prevent any vertical movement of the pressure strip when the window is being raised or lowered.

As the pairs of strips are arranged at each side of the window, and as the glass bears at its side edges against the flanges 8 of each fixed strip, it will be seen that the said window, whether the same has a frame or not, is prevented from any side movement or rocking, so that the same may be moved without binding and it will be further seen that the engagement of the flange 16 of the pressure strip behind the flange 8 of the fixed strip, prevents the pressure strip from becoming dislodged or removed from the window groove, when the window is broken, as the inner edge of the stop strip 3 is sufficiently close to prevent disengagement of the flanges 8 and 16.

The stop strips are each provided with a plurality of spaced sockets 17 preferably formed by boring into the inner edges thereof, as shown, and a coiled expansile spring 18 is located in each socket to bear against the adjacent face of the flange 14 of each pressure strip to force the latter into yielding engagement with the face of the window and effectually prevent the latter from rattling and to prevent the ingress of water or air into the car or automobile. Other forms of springs may be employed to effect the required pressure, if desired, and the replacement of a broken window or a broken spring may be easily and quickly effected by the simple removal of the stop strips. No attempt has been made in the drawing to illustrate the usual form of raising or lowering means for windows of the class illustrated.

From the foregoing it will be seen that a simple and cheaply manufactured window channel has been provided which may be easily installed in position in the window frames of cars, automobiles or in houses or buildings, that the same readily permits of the replacement of broken windows and that rain, moisture, dust and air are effectually excluded when the window is closed, while at the same time the latter may be easily raised and lowered as it is held against rattling or other noises.

What is claimed is:—

1. A window channel comprising a longitudinal strip rigidly fixed within a window frame and adapted to contact with the outside face of a slidable window, a longitudinal pressure strip adapted to contact with the inner side face of the window and hold same constantly against the fixed strip, and means

for exerting pressure on the pressure strip to yieldingly press the window against the fixed strip.

2. A window channel comprising a longitudinal strip rigidly fixed within a window frame and extending from the top of the window when in its uppermost position to the bottom of the same when in its lowermost position, and contacting with the outside face of the window, a coacting pressure strip of substantially equal length with the fixed strip and adapted to press against the inner face of the window throughout the length of the latter, and upper and lower tongues formed on the ends of the fixed strip and overlapping the ends of the pressure strip to prevent longitudinal movement of the latter while permitting the same to press the window against the fixed strip.

3. A leak-proof, anti-rattling channel for automobile windows or the like comprising opposite, longitudinal strips of angle formation, one flange of each strip being fixedly attached in the window groove of the window casing and adapted to bear against the outer face of the window near the side edges thereof, the other angular flange of each fixed strip bearing against the side edges of the window to prevent edgewise movement thereof and having outwardly extending lugs at their upper and lower ends, coacting pressure strips of angle formation and each having a flange to bear against the vertical margins of the opposite face of the window, the other flanges of the pressure strips bearing against the outer faces of the window edge engaging flanges of the fixed strips to prevent dislodgement of the pressure strips from the window grooves, the last-named flanges fitting at their ends between said lugs to prevent vertical movement of the pressure strips, and coiled springs seated in the window casing and bearing against the pressure strips to force the latter against the window.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature.

CLARENCE S. APPLAS.