Jan. 28, 1958 H. CLAYTON-WRIGHT 2,820,992

SLIDING WINDOWS OR OTHER PANELS

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FIG. 1.

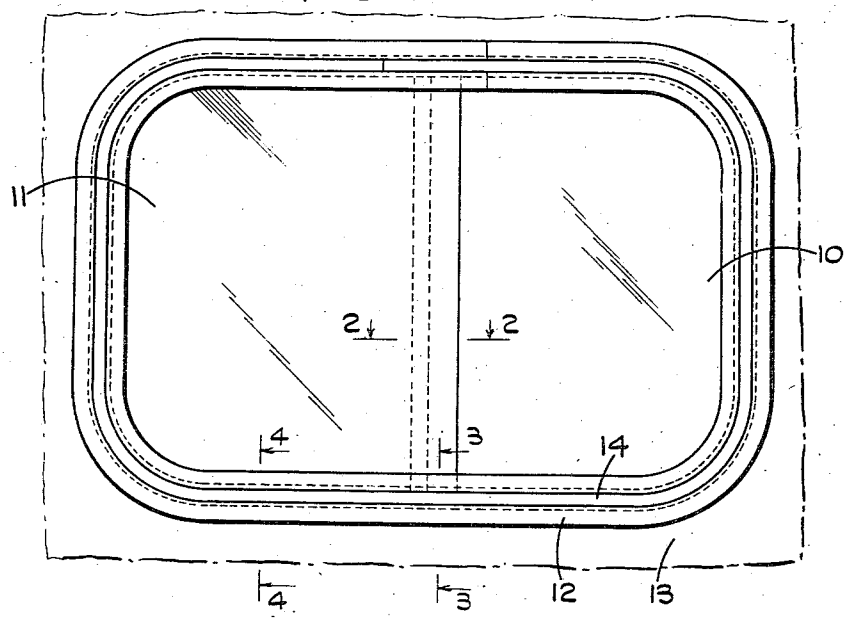

FIG. 2.

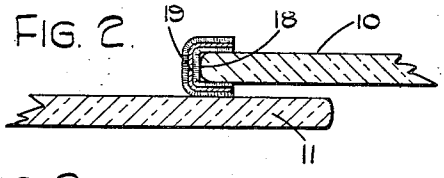

FIG. 3.

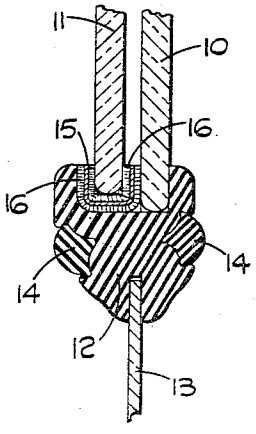

FIG. 4

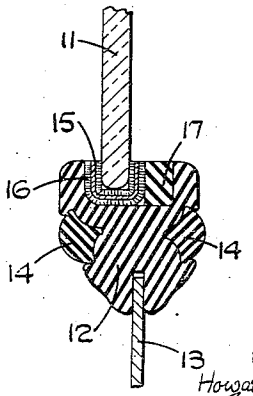

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FIG. 5.

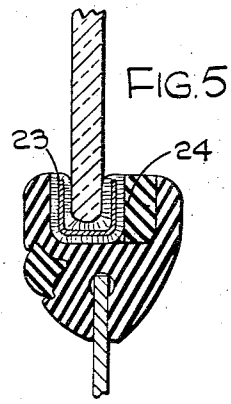


FIG. 6.

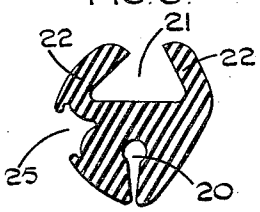


FIG. 7.

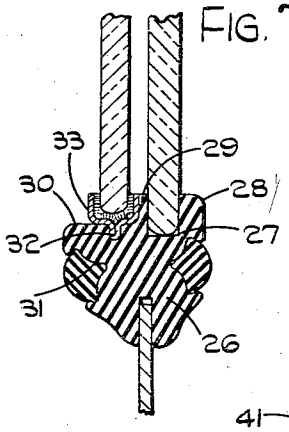
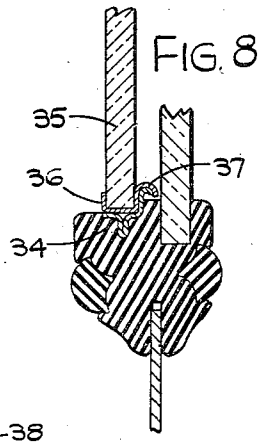


FIG. 8.



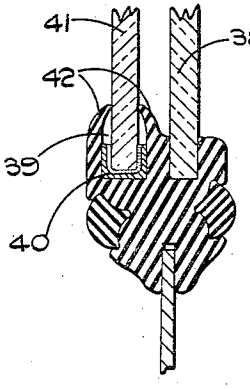


FIG. 9

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SLIDING WINDOWS OR OTHER PANELS

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Application October 26, 1954, Serial No. 464,785

1 Claim. (Cl. 20—52)

This invention relates to sliding windows or other panels and is more particularly directed to sliding windows in vehicles such as cars, buses, and caravans where the problem of weatherproofing is foremost, although the invention is not limited in its application, and may be applied to other cases of sliding windows and sliding panels which are all hereinafter referred to as "windows." The invention is concerned with the type of surround for a window which comprises a strip of rubber or the like adapted to engage the edge of the window and the edge of the surrounding structure.

The primary object of the present invention is to provide an improved form of surround in a sliding window assembly of this type, being of simple construction and allowing of easy fitment of the window assembly in the body or other surrounding structure with which it is associated.

Another object of the present invention is to provide an improved surround in such a sliding window assembly which reduces or obviates the use of exposed metal plates, pans or strips which are liable to be subject to corrosion and rusting.

A further object is to provide an improved surround which is constructed and adapted so as to permit of free drainage of water which may collect in any exposed parts of the assembly.

The invention is illustrated by way of certain embodiments thereof which are shown in the accompanying drawings wherein:

Figure 1 is a view showing a window assembly of fixed light and sliding light embodying the glazing strip of the present invention.

Figure 2 is a section on line 2—2 in Figure 1.

Figure 3 is a section on line 3—3 in Figure 1.

Figure 4 is a section on line 4—4 of Figure 1.

Figure 5 is a section similar to Figure 4 but showing a modified form of strip.

Figure 6 is a section showing the strip used in Figure 5 prior to assembly.

Figures 7, 8 and 9 are similar sections showing three arrangements for preventing collection of water in the channel which receives the sliding light.

All the glazing strips described hereinafter embody the known form of filler strip principle and as the operation of assembly of such strip is well known to those skilled in the art, such operation is not described in detail herein.

In one construction, shown in Figures 2 to 4, the glazing surround for the sliding window unit of Figure 1, which consists of one fixed light 10 and one sliding light 11, comprises a strip 12 of rubber or rubber-like material which is conveniently extruded to the required cross sectional shape, and in this particular construction the strip is adapted to engage the inner edge of the body panel 13 which forms the fixed surrounding structure of the window unit.

Considering the lower edge of the window unit, Figures 3 and 4, the cross section of the rubber strip is

such that on its lower side it provides a groove which extends vertically upwardly and which is adapted to receive the upper edge of the body panel 13 at this position. On its upper side the strip is of substantially U section and is provided with a channel extending longitudinally of the strip and of substantially rectangular cross section.

One each side the strip has longitudinally extending grooves which are adapted to receive filler strips 14 as is more particularly described hereinafter.

This strip, which is hereinafter referred to as the main strip, is first fitted into the window surrounding structure by engaging the groove in the lower side of the strip with the edge of the body panel 13 and then, along the straight run on the lower edge and the upper edge of the surround the large channel in the strip is fitted with a substantially rigid guide 15 for the sliding light 11, and this guide conveniently comprises a trough section length of aluminium strip, covered on its inner and outer faces with layers 16 or felt or like material.

This guide occupies just over half the channel in the strip and the other half of the channel is occupied over a certain length of the strip by the fixed light 10 and over the remaining length of the strip there is provided a rectangular section rubber insert 17 which occupies the space between the inner face of one side of the channel and the outer face of the guide mounted in the channel.

When the fixed and sliding lights have been mounted in place the filler strips 14 are inserted into their respective grooves by means of a suitable tool. These filler strips may be of cross section greater than the groove, so that they are forced into place, this causing the grooves to expand and deform the section of the main strip so as to cause it to clamp on the body panel 13 and also to clamp on the rigid guide 15 in its upper channel and the fixed light and rubber strip insert.

If desired the cross section of the main strip may be such as to provide means for adding a decorative finishing plate, such as chromium plated strip. For example, the main strip may have on one or both sides two outwardly projecting lugs, one disposed at the top and one at the bottom of the main strip and these lugs may have shallow grooves therein into which can be sprung the upper and lower edges of a decorative strip.

Alternatively, if the body panel has secured to it on either side an outwardly projecting structure then the section of the main strip may include a laterally projecting flanged part, which will engage with any structure on the side of the body panel so as to present a smooth unbroken appearance and continuity between the main strip and the surrounding window structure.

Also, the free vertical edge 18 of the fixed light 10 is provided with a covering which may be a felt covered aluminium guide 19 of trough section similar to the guides for the sliding window. The presence of this permits the sliding light to move freely without being scratched by contact with the fixed light and also provides a water seal at the joints between the fixed light and sliding light.

The main strip may be coloured, if desired, as also may be the filler strip, and also the section of the main strip may be such that instead of a groove on its lower edge it provides a rib of dovetail formation which can be engaged with a channel in the surrounding body structure.

The arrangement provides a sliding window unit which is of extremely simple construction and which allows of the unit being easily fitted in place. Further it dispenses with the use of metal plates, pans or strips so that the disadvantage of rusting of the surround is avoided and the sliding window will not be liable to become stuck

due to accumulation of rust in its guides. Further, the felt covered guides ensure adequate weather tightness between the sliding window and the fixed light.

The sliding window unit, in accordance with the present invention, can be rapidly fixed in position without the need of any screws or adhesives or other fastening means.

The modified strip shown in Figures 5 and 6 is provided with only one filler strip instead of two. As shown in Figure 6, the strip prior to assembly is somewhat of U-shape, having a groove **20** along one side and a U-shaped channel **21** along the opposite side, and the wings **22** of this channel can be bent outwards to allow insertion of the guide **23** and fixed insert **24** and the fixed and sliding lights. Along one edge the strip has the usual groove **25** for receiving the filler strip.

Whilst the above arrangements may be adequate for certain uses, such as for industrial purposes, in other cases, such as in cars and coaches or aircraft it is desirable to provide means for preventing, or disposing of, the collection of water from rain or condensation which is liable to occur in the trough section of the guide for the sliding light.

The modified forms of strip shown in Figures 7–9 are designed for this purpose. It would of course be possible to provide drainage holes, in the constructions shown in Figures 3 to 6, extending through the guide and the body of the strip but this is somewhat cumbersome and the strips shown in Figures 7 to 9 are intended to avoid this.

In Figure 7 the main strip has the grooves for the body panel and filler strip as before but on the upper side it has a channel **27** bounded by upstanding walls **28** and **29** and a ledge **30** provided with a groove **31**.

The fixed light is received in the channel **27** and the groove **31** receives a rib **32** on the underside of a channel section guide **33** which is felt covered on its inside and which receives the sliding light. With this arrangement the guide **33** can easily be provided with drainage holes to allow water to escape therefrom over the ledge **30**.

The construction of Figure 8 is similar in some respects to that of Figure 7 being provided with a channel for receiving the fixed light and a groove which in this case receives a rib on a guide strip **34**. The edge of the sliding light **35** has fixed thereon a second strip **36** which is of channel form and has a curved lip **37** engaging slidably over a curved lip on the guide strip **34**. In this case the strip **36** slides over the guide strip **34** and there is no trough section to collect water.

In a further form shown in Figure 9 the strip has grooves for the body panel and filler strips and a channel for the fixed light **38**. In this case the remainder of the upper edge of the strip provides a channel **39** to receive a guide **40** for the sliding light **41**, this channel being bounded by walls which terminate in flexible lips **42** which press resiliently against the sliding light. Over the portions of the strip not occupied at any moment by the sliding light the flexible lips **42** close together and seal the channel **39** against ingress of water.

What I claim then is:

In a sliding window assembly, a supporting structure having an opening in which is mounted a fixed pane and a sliding pane and a frame for said fixed and sliding panes comprising a main strip of elastic deformable material, having one edge thereof adapted for engagement with the edge of said opening and having the opposite edge thereof provided with a longitudinally extending channel which over part of its length receives the edge portions of the fixed pane and which also receives a separate strip in those parts of the channel not occupied by the fixed pane, said main strip having a second longitudinally extending channel running parallel with and transversely spaced from the first channel by an intermediate longitudinally extending portion of the strip, and a rigid guide of channel cross section having the edge portions of the sliding pane mounted slidably therein disposed within said second channel, the sides of said second channel being extended outwardly to provide two elongated flexible lips adapted to engage one another to seal off portions of said second channel not occupied by the sliding pane at any time.

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