Dec. 21, 1937. D. C. BAILEY 2,102,935

WINDOW GLASS CHANNEL LINING

Filed Jan. 21, 1937

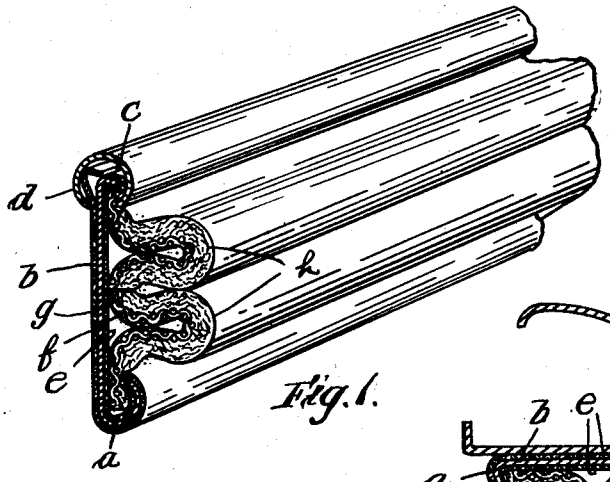


Fig. 1.

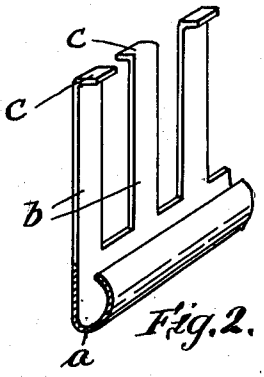


Fig. 2.

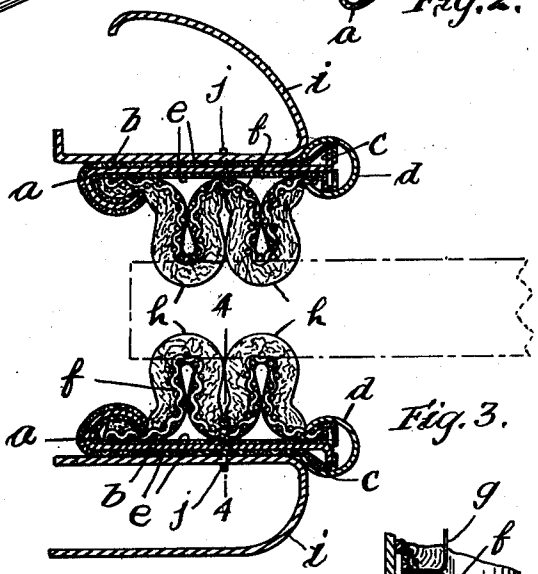


Fig. 3.

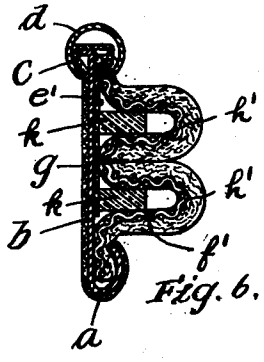


Fig. 6.

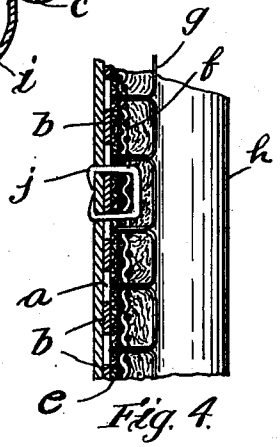


Fig. 4.

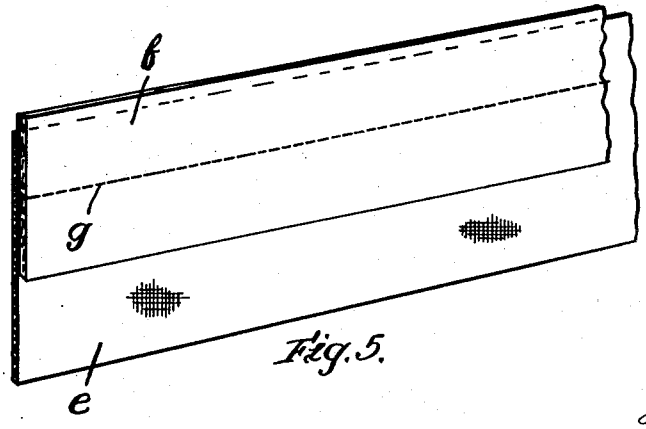


Fig. 5.

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WINDOW GLASS CHANNEL LINING

David C. Bailey, Amesbury, Mass.

Application January 21, 1937, Serial No. 121,471

9 Claims. (Cl. 296—44.5)

This invention relates to certain improvements in linings for window glass channels, and more particularly to improvements on the type of lining shown in my prior Patent No. 2,058,942, dated October 27, 1936.

When a lining of this type is attached to the garnish frame at the sides of the glass-run, wire staples are driven thru the middle portion of the lining and thru the sheet metal garnish frame and are clinched on the inner side of the latter. In order that these staples may be forced thru the sheet metal it is necessary that a staple of large wire be employed, which is of sufficient strength to enable its prongs to pierce their own holes through the sheet metal. As a result, two defects are liable to occur—the staples either depress the cushioning material on the strip to such an extent as to make the weather seal defective at the points where the staples are driven, or the staples are not depressed into the material far enough to prevent their engagement with the glass.

The primary object of my invention is to provide a form of lining strip which may be attached to the garnish frame by staples, without depressing the effective portion of the cushioning material, and which is so constructed that the staple will be driven in beyond the glass engaging portion of the cushioning material to such an extent that all possibility that the staple will engage the glass is avoided.

Other objects are to reduce the cost of the cushioning lining and make the use of the cushioning shim, which it was found necessary to employ in the previous construction, unnecessary, so that a substantial reduction in manufacturing cost may be made without in any degree diminishing the effectiveness of the lining strip.

I accomplish these objects by attaching a cloth covering strip, for the core of the strip, to a fabric lining strip, which is formed so as to produce two cushioning ribs equidistantly spaced from the middle of the core, so that the staples may be driven between the ribs, without disturbing the effectiveness of the latter.

For a more complete disclosure of my invention, reference is now made to the following specification, in connection with the accompanying drawing in which:—

Fig. 1 is a combined cross sectional and perspective view, on a greatly enlarged scale, of a lining strip embodying a preferred form of my invention.

Fig. 2 is a detail view of a portion of the core.

Fig. 3 is a cross sectional view indicating the method of attachment to the garnish frame.

Fig. 4 is a sectional view at line 4—4 of Fig. 3.

Fig. 5 is a detail view illustrating a preliminary step in the covering operation.

Fig. 6 is a cross sectional view of a modification of the invention.

As shown in the drawing, the type of metal core which is preferably employed is identical to that disclosed in my said prior patent, which comprises a sheet metal strip having a rolled continuous edge portion *a*, from which suitable spaced tongues *b* extend transversely, the end portions of the tongues having oppositely bent portions *c* which are enclosed in a stainless steel finish bead *d*, the construction permitting a slight movement of the tongues in the bead to permit bending, to conform to the outline of the window opening.

According to my present invention, I provide a strip *e* of thin but stout cloth and a strip of fabric, which may be plush, felt or cloth with a heavy nap, and connect said strips by stitches *g*, which extend along a longitudinal line at a distance from the edge of the strip *e* and at the middle of the strip *f*, as indicated in Fig. 5.

Before assembling the strips and core, the latter is passed thru a bath of liquid cement, which is permitted to dry sufficiently to become tacky, and then the cloth strip is wrapped about the core in such a position that its two edge portions extend into the finish bead *d* and the line of stitches *g* are held at the middle of the core, at its outer side. The width of the fabric strip *f* is substantially greater than the width of the core, and the edge portions of said strip *f* are placed within the bead *d* and the rolled edge *a*, respectively, which latter are clamped thereagainst with sufficient force to hold them securely in this position. As the covering strip *e* is held in contact with the surface of the core at both sides, the strip *f* will be gathered in two parallel loop shaped ribs *h*, which extend longitudinally of the core, at each side of the middle thereof with their adjacent sides in contact, as shown in Fig. 1.

Before the fabric strip *f* is attached to the cloth strip *e*, its back side is preferably rubber impregnated, to give the ribs *h* the desired stiffness, yet permitting them to yield sufficiently to accommodate glass of different thicknesses and to provide a suitable cushioning effect for the glass.

When the lining is installed, lining strips are attached to the opposite sides of the window glass channel of the casing, formed for example, by the garnish frame *i*, so that the ends of each pair of loops on each strip engage one side of the window glass, as indicated in Fig. 3.

In attaching the strip to the garnish frame *i* staples *j* are driven through the strip along the line of the stitches *g*, or between the ribs *h*, as indicated in Figs. 3 and 4, the staples being clenched on the inner side of the garnish frame

before it is placed in position, so that the strips are securely attached.

As thus arranged the tops of the staples are held at a substantial distance beneath the tops of the cushioning ribs *h*, so that all possibility that the staples will engage the glass is avoided and at the same time the staples do not to any extent tend to impair the weather seal or cushioning effect of the ribs.

The construction also provides an improved cushioning effect, as compared with that produced by the construction of my said prior patent, and the employment of a shim to reinforce the plush cushioning material is unnecessary. If, however, a light weight fabric *f'* should be employed, the ribs *h'* may be reinforced by placing a core *k* within each rib, as shown in Fig. 6. This may be done by extruding rubber within the ribs at the time that the various parts of the lining are assembled.

It is to be noted that the cloth covering *g*, which is adhesively connected to the core, has several important functions:—it not only holds the cushioning fabric in position at the middle of the core, but, when the lining is installed, it is sometimes necessary to cut off the strip at an oblique angle, so that some of the tongues of the core are severed from the rolled edge and are only supported at one end by the finish bead *d*. Under such condition the severed tongues will be held in position by the textile covering which will be adhesively connected to both sides thereof.

I claim:

1. A window glass channel lining comprising a substantially flat, elongated strip of sheet metal forming a core, said core having a fabric cushioning strip on the face side thereof, secured at its edges to the opposite edge portions of the core and held at the middle thereof at the middle of the core, the portions of the strip between its middle and each edge extending outwardly from the core, in loop form, to provide a pair of longitudinally extending cushioning ribs arranged for engagement at their ends with one side of the window glass.

2. A window glass channel lining comprising a substantially flat, elongated strip of sheet metal forming a core, said core having a fabric cushioning strip on its face side, said strip being attached at its edges to the opposite edge portions of the core and attached at its middle to the middle of the core, the portions of the strip between its middle and each edge being extended outwardly from the core in loop form to provide longitudinal cushioning ribs disposed in close proximity and arranged for engagement at their ends with one side of the window glass.

3. A window glass channel lining comprising a substantially flat, elongated strip of sheet metal forming a core, a textile covering attached thereto, a fabric cushioning strip on the face side of said core attached at its middle portion to said covering and at its edges to the opposite edge portions of said core, the portions of said strip between its middle and edges being extended outwardly from the core in loop form, to provide a pair of longitudinal cushioning ribs disposed in close proximity and arranged for engagement at their ends with one side of the window glass.

4. A window glass channel lining comprising a substantially flat, elongated strip of sheet metal forming a core, a textile covering attached thereto, a fabric cushioning strip on the face side of said core attached to said covering by a row of stitches which extend longitudinally of the middle of said strip, said strip being held thereby in proximity to the core, and being attached at its edges to the opposite edge portions of the core, the portions of said strip between its middle and each edge being extended outwardly from the core in loop form, to provide a pair of longitudinal cushioning ribs disposed in close proximity and arranged for engagement at their ends with one side of the window glass.

5. A window glass channel lining comprising a sheet metal core, a textile covering adhesively attached to the outer surface of said core, a fabric cushioning strip of greater width than the width of said core attached to said covering along a longitudinal line at the middle of said strip and clamped at its edges to the opposite edge portions of said core, the portions of said strip between its middle and edges being extended outwardly in loop form from the core in close proximity to, and at opposite sides of said line, to form longitudinal cushioning ribs for one side of the window glass.

6. A window glass channel lining comprising a sheet metal core having a fabric cushioning strip on its face side, said strip being clamped at its edges to the opposite edge portions of the core and attached at its middle to the middle of the core, the portions of the strip between its middle and each edge being extended outwardly from the core in loop form with their adjacent sides in engagement to provide longitudinal cushioning ribs, and a reinforcing core within each of said ribs.

7. A window glass channel lining comprising a sheet metal core having a continuous rolled edge and a series of tongues extending transversely therefrom and a bead enclosing the ends of said tongues, a cushioning strip on the face side of said core secured at one edge by said rolled edge and at the other edge by said bead, and means for attaching the strip at its middle to the middle of the core, the portions of said strip between its middle and each edge being extended outwardly from the core in loop form, to provide a pair of longitudinal cushioning ribs.

8. A window glass channel lining comprising a sheet metal core having a continuous rolled edge and a series of tongues extending transversely therefrom and a bead enclosing the ends of said tongues, a textile covering adhesively attached to both sides of said core, a cushioning strip attached at its middle to said covering and at its edges to said core by clamping engagement of said bead and rolled edge, the portions of said strip between its middle and each edge being extended outwardly from the core in loop form to provide longitudinal cushioning ribs.

9. In combination with a window casing having a window glass channel therein, a lining member disposed on each side of the channel, each member comprising a sheet metal core, a cushioning strip on the outer side of said core, said strip being attached to the core along its middle line and at its edges to the opposite edge portions of the core, the portions of said strip between its middle and edges being extended outwardly from the core in loop form to provide longitudinal ribs arranged for engagement at their ends with one side of the window glass, and fasteners extending through each strip between the ribs thereof, and through the core and casing, to attach the member to the casing.

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