

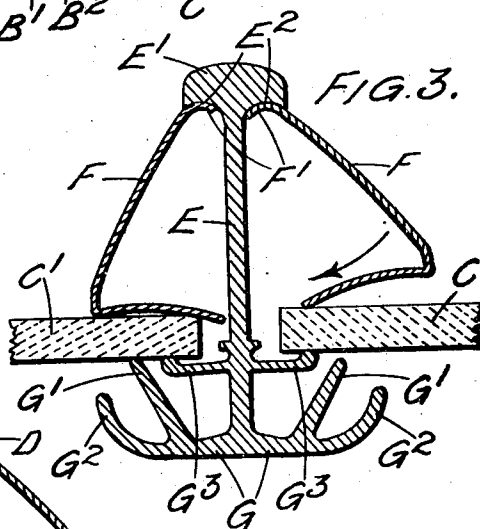
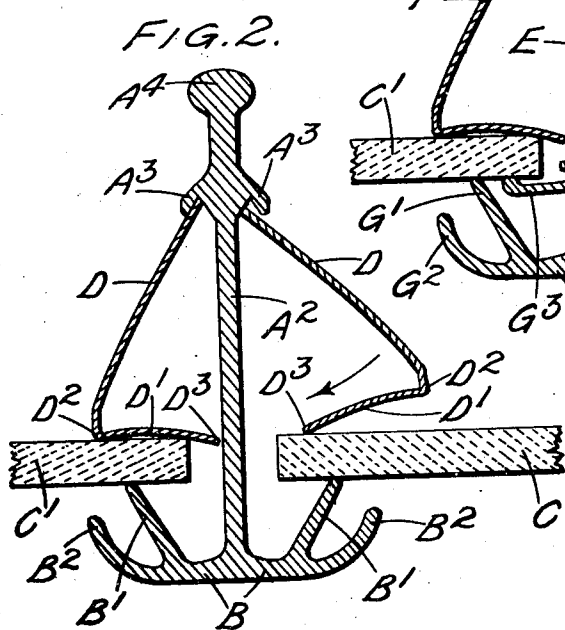
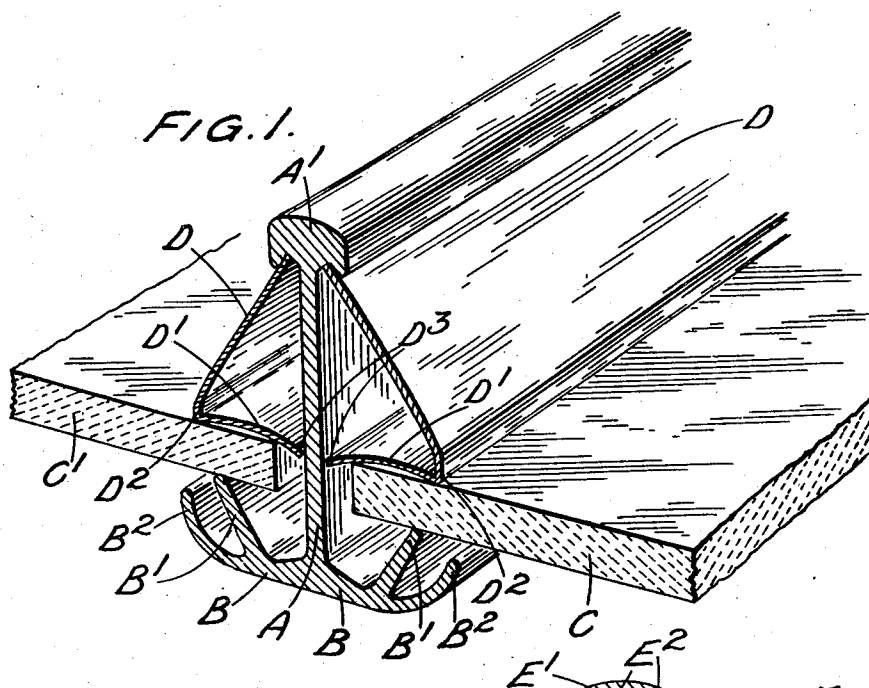
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GLAZING BAR

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GLAZING BAR

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5 Claims. (Cl. 108-16)

This invention relates to glazing bars of the kind comprising a main part or web having a pair of spaced abutments which extend longitudinally and are formed integrally with it, the edge of the glass being held between one of these abutments and a clamping bar which cooperates with the other abutment. The object of the present invention is to provide an improved glazing bar which will be simple and inexpensive to produce and effective in operation.

To this end a glazing bar according to the present invention comprises a web having a pair of spaced abutments which extend longitudinally and are formed integrally with it, and between which the edge of a sheet of glass lies so as to rest on one of them, and between the glass and the other abutment a resilient clamping bar of which the cross-section is generally L-shaped and has one limb sloping from the said abutment away from the web to the surface of the glass and the other limb extending inwards towards the web being so shaped that its end projects beyond the edge of the glass and beyond the plane of the adjacent face thereof so as to keep the clamping bar in position.

In one convenient arrangement the limb of the clamping bar nearer to the glass is concavely curved or otherwise so shaped as to present, for engagement by the edge of the glass, a surface sloping in such a direction as to tend to urge the angle of the clamping bar towards the glass irrespective of the exact position of the edge of the glass.

The invention may be carried into practice in various ways but three alternative constructions of glazing bar according to the invention are illustrated by way of example in the accompanying drawing, in which

Figure 1 is a sectional perspective view of one construction of glazing bar according to this invention,

Figure 2 is a cross-section of an alternative construction of glazing bar according to the invention, and

Figure 3 is a cross-section of a further alternative construction, also according to the invention.

In the construction illustrated in Figure 1, the glazing bar comprises a main girder-like member, for example of an aluminium alloy, from one edge of the web A of which extend laterally two main projections B having rib-like parts B¹ each constituting a main abutment and adapted to bear on one face of a sheet of glass C, C¹. The edge of the web A remote from the projections B is formed with a rib or bead A¹ the underside of

each edge of which constitutes a subsidiary abutment forming a seating for the inner edge of a clamping bar D of generally L-shaped cross-section, as shown, and formed from a resilient material, for example a suitable aluminium alloy. The outer edge of each clamping bar D is bent inwards towards the web as shown at D¹, the parts D¹ being somewhat curved as indicated and so arranged that when, after placing the inner edge of each clamping bar in engagement with its abutment A¹, the outer edge is pressed inwards towards the web, the part D² of the clamping bar joining the arms of the L will be brought into engagement with the adjacent face of the glass C, C¹ while the free edge D³ of this part will extend beyond the edge of the glass and through the plane of the adjacent face of the glass so as to cause the part D² of the bar to be pressed firmly into and maintained in engagement with the adjacent face of the glass.

Extending from each of the projections B is a protective flange B² which extends outwards beyond the point where the part B¹ engages the glass but not into contact with the glass.

In the alternative construction illustrated in Figure 2, the glazing bar comprises a girder-like member having a web A² one edge of which is formed with parts B, B¹, B² constructed similarly to the corresponding parts in the construction shown in Figure 1. Instead of the subsidiary abutments for the inner edges of the clamping bars D being constituted by the under edges of a rib extending along the edge of the web remote from the members B, however, the subsidiary abutments forming seatings for the inner edges of the clamping bars D, D¹, D², D³ in the construction shown in Figure 2 are constituted by separate ribs A³ as shown and the web extends outwards beyond these ribs and is provided with a bead A⁴ along its edge. In this way, the strength of the web is increased above that of the web shown in Figure 1 while retaining the dimensions of the clamping bars D the same. Thus clamping bars of the same size can be used with glazing bars according to the invention constructed either as shown in Figure 1 or as shown in Figure 2.

When assembling a glazing bar according to the invention as shown in Figure 1 or in Figure 2, one face of each sheet of glass is first brought into engagement with the appropriate member B¹, the inner edge of each clamping bar D is then placed in engagement with its abutment A¹ or A³ as shown at the right-hand side of Figure 2, and the outer edge of the clamping bar is then

pressed inwards towards the web until the clamping bar occupies the position shown in Figure 1 and at the left-hand side of Figure 2.

In some cases the parts B¹ may be provided with caps of packing material, for example of a flexible nature extending over their free edges so as to form a packing between the projections and the glass while, if desired, the edges of the main abutments or of the locking bars or both where they engage the glass may be provided with shallow channels to receive textile or other flexible packing material to assist in maintaining the joint between them and the glass. Further, in some cases, additional projections may be provided on the web to space the edge of the glass positively a predetermined distance from the web, these projections being such as not to interfere with the passing of the free edges D³ of the clamping bars beyond the edge of the glass and through the plane of the adjacent face of the glass.

In the alternative construction illustrated in Figure 3, the glazing bar is generally similar to that shown in Figure 1 but the web E terminates in a rib or bead E¹ which is furnished on its underside with curved grooves E² instead of the substantially rectangular channels shown in the other figures. Each of these curved grooves constitutes a subsidiary abutment to form a seating for the curved inner edge F¹ of a clamping bar F of generally L-shaped cross-section as already described. By curving the upper ends of the resilient bars a better bearing is provided for these members and the fixing of the glass in position is facilitated.

At its lower end the glazing bar illustrated in Figure 3 is provided with main lateral projections G each having a rib-like part G¹ to constitute a main abutment adapted to bear on the underface of the glass sheet as already described and also provided with a protective flange G² similar to the flanges B² shown in the other figures.

In addition to the members G¹, G², arms G³ are provided which are preferably slightly resilient and have their outer ends beaded, as shown, to engage the underside of the glass sheet and ensure a dust-tight fit therewith.

It will be appreciated that the glazing bar above described may be provided with a bead similar to that shown at A⁴ in Figure 2 and that in all cases the clamping bars may have curved inner ends, as shown in Figure 3, whether the additional flexible arms such as G³ are employed or omitted.

It is to be understood that, although the invention has been described with particular reference to glazing bars in which the main part of the bar and the clamping bars are formed of suitable aluminium alloys, the parts may be formed of other metals or substances having the necessary rigidity and resilience for the purposes required. Further, the form of the main abutment or abutments engaging one face of the glass, and the protective flange or flanges, where provided, and the form of the locking bars and the subsidiary abutments forming seatings for their inner edges, as well as other details of construction, may be modified without departing from this invention.

The parts of glazing bars according to the invention may, where convenient, be produced by an extrusion process.

What I claim as my invention and desire to secure by Letters Patent is:—

1. A glazing bar comprising a web having

spaced main and subsidiary abutments which extend longitudinally and are formed integral with it and between which the edge of a sheet of glass is adapted to lie so as to rest on the main abutment, and a clamping bar disposed between the glass and the subsidiary abutment, this clamping bar having sufficient resilience to permit limited flexing thereof during insertion and having two portions one of which slopes away from the web to the surface of the glass while the other or glass-engaging part extends inwards towards the web and is gradually curved so that its inner edge where it engages the edge of the adjacent face of the glass is inclined to the face of the glass and projects beyond the edge of the glass and through the plane of the adjacent face thereof so that by its reaction against the edge of the glass, it tends always to move towards the web and thus acts as a tension member which tends to draw the junction between the two parts of the bar towards the web and thereby maintain it in contact with the glass irrespective of the exact position of the edge of the glass.

2. A glazing bar comprising a web having spaced main and subsidiary abutments which extend longitudinally and are formed integrally with it and between which the edge of a sheet of glass lies so as to rest on the main abutment, said subsidiary abutments being longitudinally recessed, and a clamping bar disposed between the glass and the recess of a subsidiary abutment and being of generally L-shaped cross-section, this clamping bar being of such resilience as to permit limited flexing thereof during insertion and being arranged with one limb sloping from the subsidiary abutment away from the web to the surface of the glass while the other or glass-engaging limb extends inwards towards the web and is so shaped that its inner edge where it engages the edge of the adjacent face of the glass is inclined to this face and projects beyond the edge of the glass and through the plane of the adjacent face thereof so that by its reaction against the edge of the face of the glass it tends always to move towards the web and thereby to draw the part of the clamping bar adjacent to the junction of the limbs towards the web and cause this part to bear on the glass with a force which is maintained by and is a function of the tension in the glass-engaging limb.

3. A glazing bar comprising a web having spaced main and subsidiary abutments which extend longitudinally and are formed integrally with it and between which the edge of a sheet of glass lies so as to rest on the main abutment, and a clamping bar disposed between the glass and the subsidiary abutment and of generally L-shaped cross-section, this clamping bar being of such resilience as to permit limited flexing thereof during insertion and being arranged with one limb sloping from the subsidiary abutment away from the web to the surface of the glass while the other or glass-engaging limb extends inwards towards the web and is bent or curved so that its inner edge where it engages the edge of the adjacent face of the glass is inclined to this face and projects beyond the edge of the glass and through the plane of the adjacent face thereof so that by its reaction against the edge of this face it tends always to move towards the web and thus act as a tension member which tends to draw the part of the clamping bar adjacent to the junction of the limbs towards the web and thereby maintains this part of the bar in contact with

the glass irrespective of the exact position of the edge of the glass.

4. A glazing bar comprising a web having spaced main and subsidiary abutments which extend longitudinally and are formed integrally with it and between which the edge of a sheet of glass lies so as to rest on the main abutment, and a clamping bar disposed between the glass and the subsidiary abutment and of generally L-shaped cross-section, this clamping bar being of such resilience as to permit limited flexing thereof during insertion and being arranged with one limb sloping from the subsidiary abutment away from the web to the surface of the glass while the other or glass-engaging limb extends inwards towards the web and is gradually curved so that its inner edge projects beyond the edge of the glass and through the plane of the adjacent face thereof whereby the part of the clamping bar adjacent to the junction of the limbs is caused to bear on the glass with a force which is maintained by and is a function of the tension in the glass-engaging limb, the surface of the subsidiary abutment engaged by one edge portion of the clamping bar being curved so as to be part-cylindrical and the said edge portion of the clamping bar being correspondingly curved to engage therewith in such manner that the clamping bar extends from the part of the curved surface of the abutment remote from the web.

5. A glazing bar comprising a web having

spaced main and subsidiary abutments which extend longitudinally and are formed integrally with it and between which the edge of a sheet of glass lies so as to rest on the main abutment, and a clamping bar disposed between the glass and the subsidiary abutment and of generally L-shaped cross-section, this clamping bar being of such resilience as to permit limited flexing thereof during insertion and being arranged with one limb sloping from the subsidiary abutment away from the web to the surface of the glass while the other or glass-engaging limb extends inwards towards the web and is bent or curved so that its inner edge is inclined to the face of the glass and projects beyond the edge of the glass and through the plane of the adjacent face thereof thus acting as a tension member which tends to draw the part of the clamping bar adjacent to the junction of the limbs towards the web and thereby maintains this part of the bar in contact with the glass irrespective of the exact position of the edge of the glass, the surface of the subsidiary abutment engaged by one edge portion of the clamping bar being curved so as to be part-cylindrical and the said edge portion of the clamping bar being correspondingly curved to engage therewith in such manner that the clamping bar extends from the part of the curved surface of the abutment remote from the web.

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