Oct. 31, 1939. J. WILLIAMS 2,178,507

FITTING FOR USE WITH GLAZING BARS

Filed Dec. 12, 1938

Fig. 1.

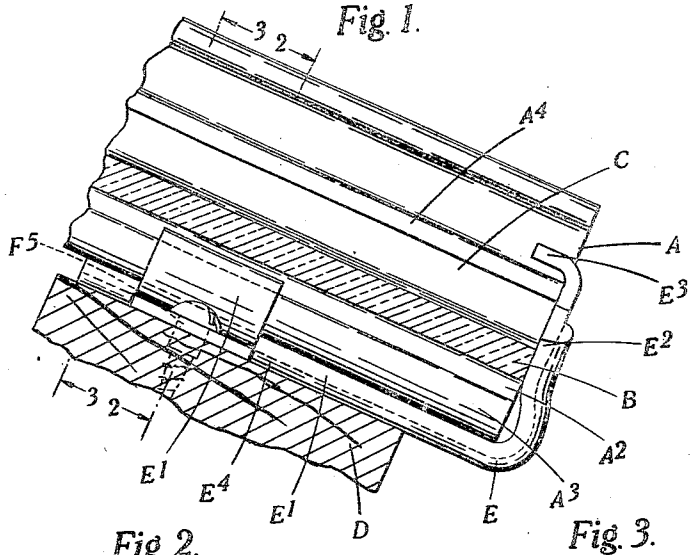


Fig. 2.

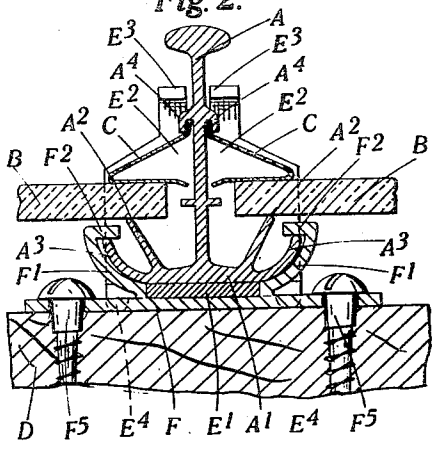


Fig. 3.

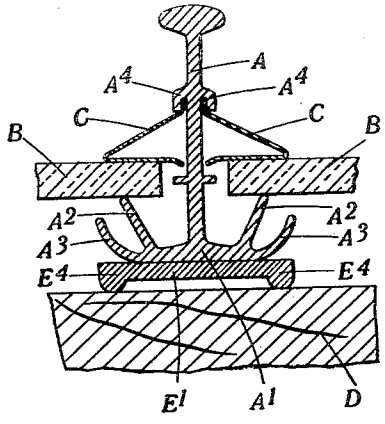
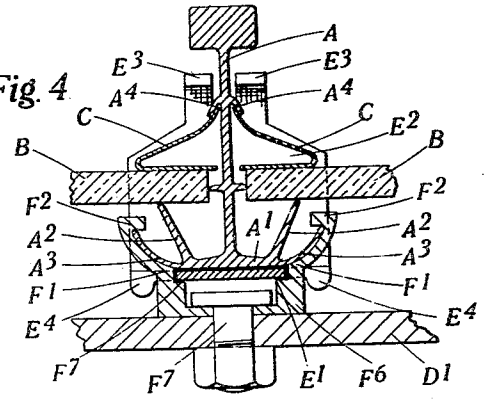


Fig. 4



Inventor
J. Williams
by Clair Hillsmyer
Attorneys

Patented Oct. 31, 1939

2,178,507

UNITED STATES PATENT OFFICE

2,178,507

FITTING FOR USE WITH GLAZING BARS

Jack Williams, London, England

Application December 12, 1938, Serial No. 245,309
In Great Britain February 1, 1938

7 Claims. (Cl. 108—16)

This invention relates to fittings for use with glazing bars of the kind comprising a web having projections laterally therefrom a longitudinally extending flange-like abutment, on one face of which the glass bears and with which it is held in engagement by a resilient clamping bar which extends in a generally inclined direction from the point where it engages the web into contact with the other face of the glass. As a rule such glazing bars comprise a central web the base of which has a glass-supporting abutment on either side and in addition an outer flange lying outside each glass-supporting abutment and extending towards but not into contact with the glass.

The object of the present invention is to provide a convenient form of stop to engage the end of the glass which generally extends a short distance beyond the bearer, purlin or other longitudinal support for the glazing bar, and further to provide a cheap and convenient means by which the bar can be secured to its bearer.

According to this invention the glass stop for use with a glazing bar of the above type comprises a substantially L-shaped strip adapted to engage the under side and end of the glazing bar and to be secured to the bearer which supports the glazing bar. Preferably the stop comprises a single unit, of which the shank portion, adapted to engage the under side of the glazing bar, is secured to the bearer by means of a shoe and this shoe is so constructed that it not only engages the shank of the glass stop, so as to hold it in position on the bearer, but also engages the flanged lower edges of the glazing bar so as to hold it down on the shank of the stop.

In the preferred construction the shoe comprises a base plate having two curved arms, the ends of which are provided with inturned flanges. The shank of the stop has its longitudinal edges slotted so as to engage the upper face of the base plate between the arms, and the arrangement is such that after the base plate has been secured to the bearer for the bar, the shank of the stop is placed in position and the end of the glazing bar is then slid into position so that the flanged ends of the arms of the shoe engage the edges of the outer flanges at the base of the glazing bar. The shank of the stop is thus gripped between the flanged edge of the bar and the fixed shoe, and the upturned end of the stop will engage the web of the glazing bar when the latter is slid home. In this way, by means of a single shoe secured to the bearer, both the glass stop and the bearer itself are locked in position.

The invention may be carried into practice in various ways but one construction according to the invention and a modification thereof are illustrated by way of example in the accompanying drawing, in which

Figure 1 is a side elevation of one construction showing the glass and bearer in cross-section,

Figure 2 is a section on the line 2—2 of Figure 1,

Figure 3 is a section on the line 3—3 of Figure 1, and

Figure 4 is a similar view to Figure 2 of the modified construction.

In the construction illustrated in Figures 1, 2 and 3, the fitting is shown as applied to a glazing bar assembly of the kind forming the subject of the present applicant's copending United States of America patent application Serial No. 224,957, comprising a central web portion A having a flange A^1 at its base provided with upturned rib-like parts A^2 adapted to act as abutments on which the under surface of sheets of glass B rest and with upturned flange-like edges A^3.

Rib-like projections A^4 having grooves therein constitute anchorages for the upper edges of resilient clamping strips C which bear on the upper surfaces of the sheets of glass B to maintain them in contact with the abutments A^2. The parts of the glazing bar assembly shown are generally made by extrusion from aluminum or other non-corrosive alloy.

In use the bar is connected within a short distance of its outer or lower end to a bearer such as the bearer D shown, the end of the bar projecting a short distance beyond the bearer and the stop according to the invention not only serves to hold the bar from movement away from the bearer D but also to prevent the bar and glass from moving in a direction parallel to the length of the bar or parallel to the length of the bearer.

Thus, the stop comprises a substantially L-shaped unit E having a shank portion E^1 which lies below and parallel to the length of the glazing bar and between the flange A^1 and the bearer D, and an upturned end portion E^2 against which the glass B and the end of the bar A bears, this upturned end portion being provided with two inturned fingers E^3 lying one on each side of the web A.

As will be seen, the under side of the shank portion E^1 is provided with ribs E^4 so as to leave a clearance space between the central portion of the shank E^1 and the bearer D.

The unit E is connected to the bearer D by a shoe comprising a base F passing beneath the shank portion E^1, and curved arms F^1 the ends of which are inturned, as shown at F^2, to engage the edges of the parts A^3. The internal shape of the arms F^1 conforms approximately to the curvature of the parts A^3 and the ribbed sides of the shank portion E^1 of the unit E are cut away or slotted, as shown to receive the arms F^1. The base F is secured as by screws F^5 to the bearer D.

It will thus be seen that the combined stop and

shoe comprises only two parts which can readily be manufactured and yet serve to connect the bar A to the bearer D in a manner preventing the bar sliding outwards and downwards and holding the bar from movement away from or parallel to the length of the bearer D while also acting as a stop to prevent the glass B sliding outwards and downwards.

In the modified construction illustrated in Figure 4, the form of the bar A, the L-shaped stop unit E and the manner in which these two parts cooperate, is the same as in the construction shown in Figures 1, 2 and 3. In the construction shown in Figure 4, however, the shoe, instead of being constructed as shown in Figures 1, 2 and 3, is provided with a trough-like base F^6 in which lies the head of a bolt F^7 adapted to pass through a bearer D^1, for example of metal, so as to secure the shoe F^6 to the bearer D^1. The trough-like base is provided with a shoulder F^3 on which rests the part E^1 of the unit E so that this part lies between the shoulder and the flange A^1 of the bar A. The ribbed sides E^4 of the part E^1 of the unit E are provided with slots through which the arms F^1 of the shoe extend, as in the construction shown in Figures 1, 2 and 3, these arms being provided with inturned edges F^2 adapted to engage the edges of the parts A^3. In this construction it will be seen that the part E^1 of the unit E is supported by the shoe F^6 out of contact with the bearer D^1.

It will be obvious that the invention is not limited to use with glazing bars having the particular cross-section shown in the drawing and that minor constructional features may be varied without departing from the invention.

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

1. A glass stop for use with a glazing bar supported by a bearer and having a flange on its lower edge, including in combination an L-shaped strip the shank and upturned end of which are adapted to engage respectively the under side of the flange and the end of the glazing bar, and a shoe adapted to be secured to the bearer and on which the shank of the L-shaped strip rests, the shoe having laterally extending arms which engage slots in the sides of the shank and are provided with inturned ends which engage the edges of the flange to secure the flange to the shank of the L-shaped strip and to the shoe.

2. A glass stop for use with a glazing bar supported by a bearer and having a flange on its lower edge, including in combination an L-shaped strip the shank and upturned end of which are adapted to engage respectively the under side of the flange and the end of the glazing bar, and a shoe adapted to be secured to the bearer and on which the shank of the L-shaped strip rests, the shoe having laterally extending arms which engage slots in the sides of the shank and are provided with inturned ends which engage the edges of the flange to secure the flange to the shank of the L-shaped strip and to the shoe, the shoe being provided with a groove in which lies the part of the shank of the L-shaped strip engaging the shoe so that the inner surface of the arms is substantially continuous with the upper surface of the said part of the shank.

3. A glass stop for use with a glazing bar supported by a bearer and having a flange on its lower edge, including in combination an L-shaped strip the shank and upturned end of which are adapted to engage respectively the under side of the flange and the end of the glazing bar, and a shoe adapted to be secured to the bearer and on which the shank of the L-shaped strip rests, the shoe having laterally extending arms which engage slots in the sides of the shank and are provided with inturned ends which engage the edges of the flange to secure the flange to the shank of the L-shaped strip and to the shoe, the edge portions of the shank of the L-shaped strip being provided with downwardly extending ribs the under surfaces of which lie in the same plane as the under surface of the base of the shoe.

4. A glass stop for use with a glazing bar supported by a bearer and having a flange on its lower edge, including in combination an L-shaped strip the shank and upturned end of which are adapted to engage respectively the under side of the flange and the end of the glazing bar, and a shoe adapted to be secured to the bearer and on which the shank of the L-shaped strip rests, the shoe having laterally extending arms which engage slots in the sides of the shank and are provided with inturned ends which engage the edges of the flange to secure the flange to the shank of the L-shaped strip and to the shoe, the shoe being provided with a groove in which lies the part of the shank of the L-shaped strip engaging the shoe so that the inner surface of the arms is substantially continuous with the upper surface of the said part of the shank and the edge portions of the shank of the L-shaped strip being provided with downwardly extending ribs the under surfaces of which lie in the same plane as the under surface of the base of the shoe.

5. A glass stop for use with a glazing bar including the elements set forth in claim 1, in which the base of the shoe is provided with laterally extending lugs by which it can be attached as by screws to the bearer.

6. A glass stop for use with a glazing bar including the elements set forth in claim 1, in which the base of the shoe is formed with a recess in its upper surface lying below the flange of the glazing bar to accommodate the head of a bolt passing through the base of the shoe, whereby the shoe can be secured to the bearer.

7. A glass stop for use with a glazing bar supported by a bearer and having a flange on its lower edge, including in combination an L-shaped strip the shank and upturned end of which are adapted to engage respectively the under side of the flange and the end of the glazing bar, and a shoe adapted to be secured to the bearer and on which the shank of the L-shaped strip rests, the shoe having laterally extending arms which engage slots in the sides of the shank and are provided with inturned ends which engage the edges of the flange to secure the flange to the shank of the L-shaped strip and to the shoe, the shoe being provided with a groove in which lies the part of the shank of the L-shaped strip engaging the shoe so that the inner surface of the arms is substantially continuous with the upper surface of the said part of the shank and the base of the shoe being formed with a recess below the said groove to accommodate the head of a bolt passing through the base of the shoe whereby the shoe can be secured to the bearer.

JACK WILLIAMS.