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J. N. McLOUGHLIN

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GLAZING CLIP

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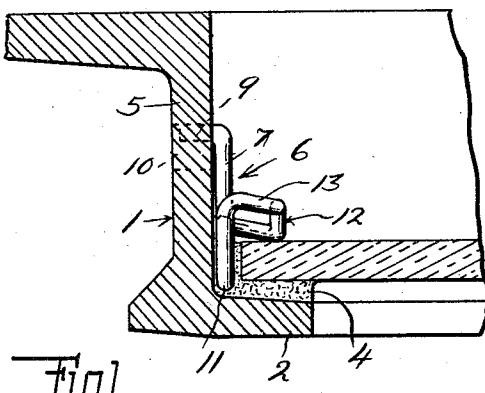


Fig. 1.

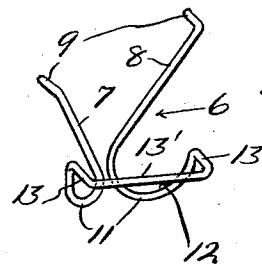


Fig. 4.

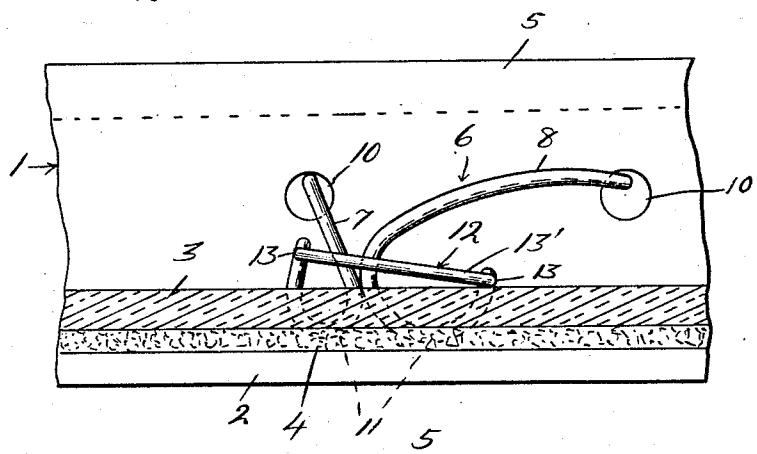


Fig. 2.

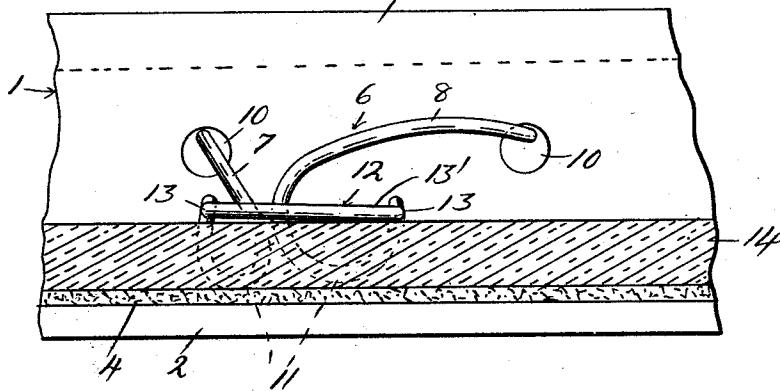


Fig. 3.

INVENTOR

Joseph N. McLoughlin

BY Whittmore Hulbert

Whittmore & Belknap

ATTORNEYS

## UNITED STATES PATENT OFFICE

JOSEPH N. McLOUGHLIN, OF DETROIT, MICHIGAN, ASSIGNOR TO DETROIT STEEL PRODUCTS COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN

## GLAZING CLIP

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The invention relates to window panes of that type for securing a window pane in position in a window sash. One of the objects of the invention is to provide an improved construction of clip which will effectively hold the pane from accidental disengagement. Another object is to so construct the clip that it may be readily engaged with and disengaged from the sash. A further object is to so construct the clip that it may be used in windows having different thicknesses of panes. With these and other objects in view, the invention consists in the novel features of construction as more fully hereinafter set forth.

## In the drawings:—

Figure 1 is a cross section through a bar of a metallic window sash, showing the clip embodying my invention applied to the bar 20 for securing the pane in position;

Figure 2 is an elevation of the bar and clip shown in Figure 1;

Figure 3 is a similar view, showing a thicker pane secured in position;

Figure 4 is a perspective view of the clip.

The clip embodying my invention is particularly applicable for securing glass panes in metallic window sashes and, as shown, 1 is a metallic bar of the sash having the flange 2, which provides a shoulder for the glass pane 3, suitable plastic material 4 being preferably provided between the flange and the pane and forming a seat for the latter. This bar has the web 5 which extends transversely of the flange 2 and is spaced from the adjacent edge 35 of the pane 3.

The clip 6, embodying my invention, is formed of resilient wire and has the legs 7 and 8, the first of which is shorter than the latter. These legs have at their outer ends the laterally bent portions 9, which are engageable with the apertures 10 formed in the web 5 of the bar at substantially the same distance from the flange 2. These legs also 45 have the inner loop portions 11 with the loop portion of the leg 7 of smaller radius than that of the leg 8. The legs extend adjacent to the web 5 and their loop portions extend between this web and the adjacent edge of the pane 3. The clip also comprises the lat-

erally bent abutment portion 12 having the transverse ends 13 connecting into the legs and the intermediate part 13'. The ends 13 are inclined from their points of juncture with the legs 7 and 8 turned toward the pane and the intermediate part 13' engages the pane to resiliently force the same toward the flange. With this arrangement the ends 13 clear the pane so that they can not damage the same and the intermediate part 13' engages the pane at a distance from its edge so that the intermediate part does not damage the pane.

The abutment portion 12 is normally inclined to the flange 2 from its point of juncture with the shorter leg to its point of juncture with the longer leg when the clip is assembled with the sash so that the portion of the intermediate part 13' adjacent the longer leg normally engages the pane. The point of juncture between this abutment portion and the shorter leg 7 is in substantially the same plane extending transversely of the pane as the point of connection between the laterally bent outer end of this leg and the sash bar. The point of juncture between this abutment portion and the longer leg is, however, offset longitudinally of the sash bar from the point of juncture of the laterally bent end of the longer leg and the sash bar. With this construction, any flexing occurring in the clip occurs mainly in the longer leg, the distance between the point of juncture of the abutment portion and the shorter leg and the laterally bent outer end of this shorter leg remaining substantially constant. As a result, the clip fulcrums about the laterally bent outer end of the shorter leg, in addition to its longer leg flexing. As shown in Figure 3, the pane 14 is of greater thickness than the pane 3 and the longer leg of the clip is flexed and the clip is bodily fulcrumed about the laterally bent outer end of the shorter leg.

In placing the clip in position, the laterally bent outer end 9 of the shorter leg 7 is inserted into an aperture in the web 5 of the sash bar 1 and the inner loop portions of the two legs entered between the web and the adjacent edge of the glass 3 by swinging the clip inwardly, after which the longer leg 8

is flexed to engage its laterally bent outer end in the other aperture of the sash bar web. This operation may be suitably carried out as by means of a putty knife.

5 It will be seen that the construction is such that the clip is securely held in position by reason of its loop portions entering between the sash bar web and the adjacent edge of the glass. It will also be seen that this clip 10 securely holds the pane in position and furthermore that it takes care of panes of various thicknesses. It will be further seen that the construction of clip is such that it can not be snapped into place, so that the corners of 15 the pane can not be chipped and that the clip bears upon the pane at a point laterally spaced from its edge so that the pane is further protected from being damaged by the clip.

20 What I claim as my invention is:

1. The combination with a sash bar and a window pane, of a clip for securing said pane to said bar having legs with one extending between said bar and the edge of said pane, 25 said legs being provided with end portions engageable with shoulders on said bar, and an abutment portion connecting said legs and engaging said pane.

2. The combination with a sash bar and a 30 window pane, of a clip for securing said pane to said bar having legs extending between said bar and the edge of said pane provided with laterally bent ends engageable with apertures in said bar, and a laterally bent portion 35 connecting said legs and engaging said pane.

3. The combination with a sash bar and a window pane, of a clip for securing said pane to said bar having legs of different length with laterally bent ends engageable with 40 apertures in said bar and a laterally bent portion connecting said legs and engaging said pane, the point of juncture of said laterally bent portion and the leg of less length being in substantially the same plane extending 45 transversely of said pane.

4. The combination with a sash bar and a window pane, of a clip for securing said pane to said bar having legs of different length provided with end portions engageable with shoulders on said bar and an abutment portion connecting said legs and engaging said pane, the point of juncture of said abutment portion and the leg of less length being 50 in substantially the same plane extending 55 transversely of said pane.

5. The combination with a sash bar and a window pane, of a clip for securing said clip to said bar having legs of different length and provided with end portions engageable with shoulders on said bar, one of said legs extending between said bar and the edge of said pane, and a lateral abutment portion connecting said legs and engaging said pane, the point of juncture of said abutment portion and the leg of less length being 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130

in substantially the same plane extending transversely of said pane.

6. The combination with a sash bar and a window pane, of a clip for securing said pane to said bar having legs provided with laterally bent outer ends engageable with apertures in said bar and with loop portions at their inner ends extending between said bar and the edge of said pane, and a laterally bent abutment portion connecting said legs and engaging said pane.

7. The combination with a sash bar and a window pane, of a resilient wire clip for securing said pane to said bar having legs of different length provided with end portions engageable with shoulders on said bar and a lateral abutment portion connecting said legs and engaging said pane adjacent to the juncture of said abutment portion and the leg of greater length, said point of juncture being offset longitudinally of said bar from the point of connection of the leg of greater length with said bar.

8. The combination with a sash bar and a window pane, of a resilient wire clip for securing said pane to said bar having legs of different length having laterally bent ends engageable with apertures in said bar, one of said legs extending between said bar and said pane, and a laterally bent portion connecting said legs and engaging said pane adjacent to the juncture of said laterally bent portion with the leg of greater length, the point of juncture of said laterally bent portion and the leg of greater length being offset longitudinally of said bar from the point of connection of said leg with said bar, and the point of juncture of said laterally bent portion and the leg of less length being in substantially the same plane extending transversely of said pane.

9. The combination with a sash bar and a window pane, of a clip for securing said pane to said bar having legs with one extending between said bar and the edge of said pane, said legs being provided with transverse end portions engageable with shoulders on said bar, and an abutment portion connecting said legs and engaging said pane at a point laterally spaced from its edge.

In testimony whereof I affix my signature.

JOSEPH N. McLOUGHLIN.