July 14, 1925. 1,545,875

H. AUSTIN

WINDOW, WINDSCREEN, AND THE LIKE

Filed Jan. 19, 1925

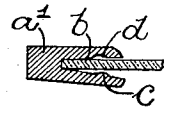



Fig. 1.

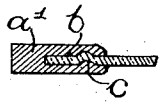



Fig. 2.

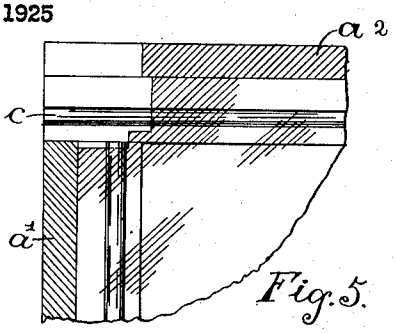



Fig. 5.

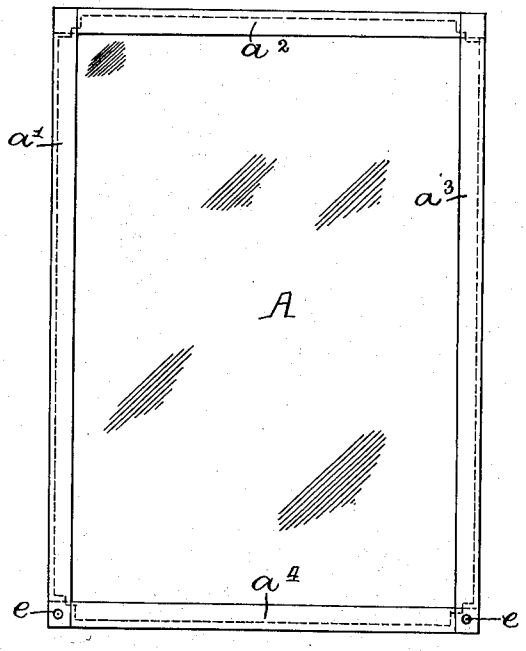



Fig. 3.

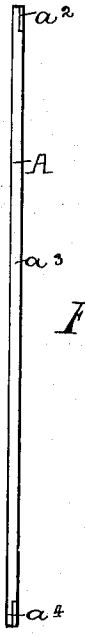



Fig. 4.

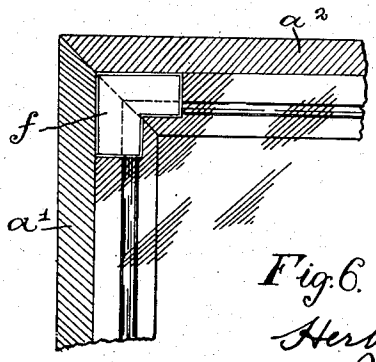



Fig. 6.

Herbert Austin

By J. Harrison

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# UNITED STATES PATENT OFFICE.

HERBERT AUSTIN, OF BROMSGROVE, ENGLAND.

## WINDOW, WINDSCREEN, AND THE LIKE.

Application filed January 19, 1925. Serial No. 3,527.

*To all whom it may concern:*

Be it known that I, HERBERT AUSTIN, a knight of the British Empire and a British subject, residing at Bromsgrove, in the county of Worcester, England, engineer, have invented certain new and useful Improvements in Windows, Windscreens, and the like, of which the following is a specification.

This invention has for its object to provide a construction of window, wind screen, side screen for a motor car or like screen, in which the transparent or other medium is celluloid or other unbreakable and flexible material, and consists in the provision of a relatively soft metal frame for use in supporting the edges of the transparent or other medium of a window or screen, said frame consisting of strips provided each with a deep groove at its inner edge to receive an edge of the transparent medium, after which the metal at the sides of the groove is pressed up closely into engagement with the medium so that the edge of the medium is bound thereby.

It is preferred that the inner surface of each side member be waved or corrugated and that counter-part corrugations be formed upon the opposing surface whereby, as the two members of the strip are closed in towards each other, the edge of the transparent medium is crimped or waved and the strip thus very securely attached.

In order that the invention may be clearly understood convenient applications thereof are described with reference to the drawings herewith of which:—

Figure 1 is a sectional view of the strip with a piece of material inserted and showing the strip before it is closed up.

Figure 2 is a view corresponding to Figure 1, but showing the strip closed up.

Figure 3 is a face view of a carriage window having its frame composed of strips according to the invention.

Figure 4 is an edge view of the window.

Figure 5 is a view to an enlarged scale to illustrate details of the corner; and,

Figure 6 is a view to illustrate details of the corner in a modified construction.

Referring first to Figures 1 to 5, a window frame A is formed from metal strips $a'$, $a^2$, $a^3$, $a^4$ shown clearly in section in Figures 1 and 2, where it will be seen that a slit or recess $b$ is formed in from the inner side edge. On the one inner face of the recess is formed a rib $c$ and the opposite face has a corresponding groove $d$. The strip is initially provided in the form shown in Figure 1; and after the sheet of flexible (and if desired transparent) material has been placed with its edge in the recess, the strip is closed up to the form shown in Figure 2 securely gripping the material.

The strips are joined together at the corners either by halving, as shown in Figures 3, 4 and 5, or by mitreing as shown in Figure 6. In either case a portion is notched out at each corner of the sheet of material as otherwise bucking would occur when the strips were closed up.

In making the window frame the top rail $a^2$ may be brazed to the side rails $a'$ and $a^3$ and the material then slid into place, the bottom rail being secured in place afterwards, such as by the pegs $e$. The brazing of the upper joints ensures the frame being of sufficient rigidity.

In the modification shown in Figure 6, where the corners are mitred, a sheet metal plate $f$, in respect of each corner, is inserted in the space left by the corner notch in the material, such plate being clenched into the strips at the corner and serving to strengthen the latter. If desired the plates may be suitably crimped before insertion.

According to a convenient method of performing the closing operation, the transparent material may be heated and the metal strips and corner pieces put in position and the whole placed in a die. The main portion of the transparent material is held in position by a central plunger which may be spring pressed and the closing operation may be performed by an outer die which follows the centre die and presses upon the side members of the strips.

In lieu of corrugations formed as counterparts, they may be formed as saw-tooth ledges or projections to grip the transparent material at each side.

Having fully described my invention, what I claim and desire to secure by Letters Patent is:—

1. A frame for window sash and the like having side frame members each made of soft pliable metal having a relatively thick and broad solid outer portion and a pair of relatively thin initially diverging flanges extending in spaced relation inwardly from said outer portion, said metal being bendable to bring the flanges into parallel rela-

tion whereby to grasp one edge of a sheet of material to form the central part of the sash.

2. A frame for window sash and the like having side frame members each made of soft pliable metal having a relatively thick and broad solid outer portion and a pair of relatively thin initially diverging flanges extending in spaced relation inwardly from said outer portion, said metal being bendable to bring the flanges into parallel relation whereby to grasp one edge of a sheet of material to form the central part of the sash, one of said flanges having a bead extending longitudinally of its inner surface and the other of said flanges having a groove complementary to said bead.

In witness whereof I have hereunto signed my name this seventh day of January, 1925.

HERBERT AUSTIN.