

April 27, 1943.

H. BIANCO

2,317,581

GLAZED METAL SASH CONSTRUCTION

Filed Sept. 11, 1941

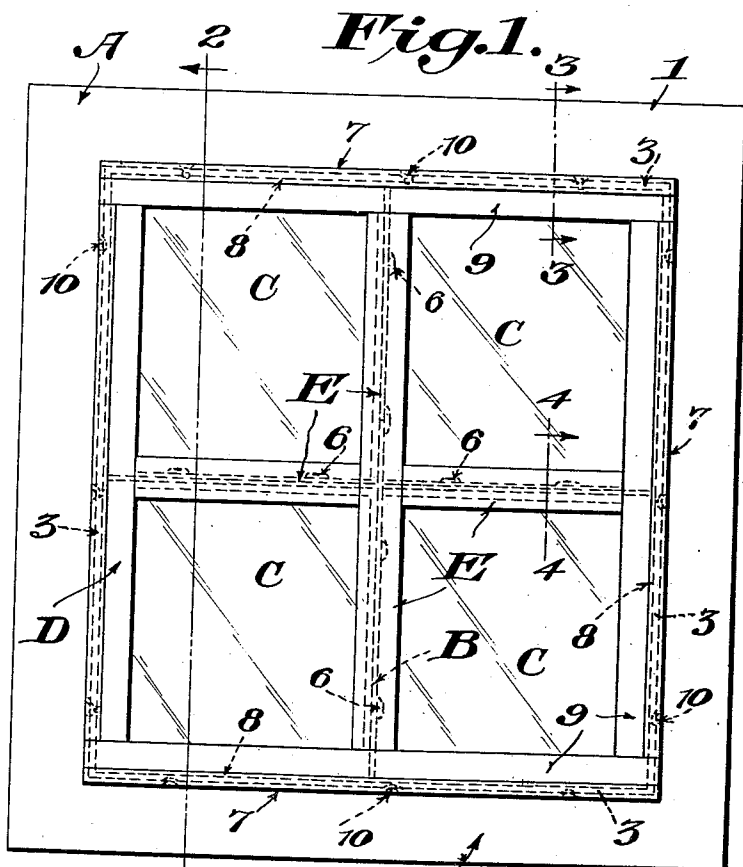


**Fig. 2.**

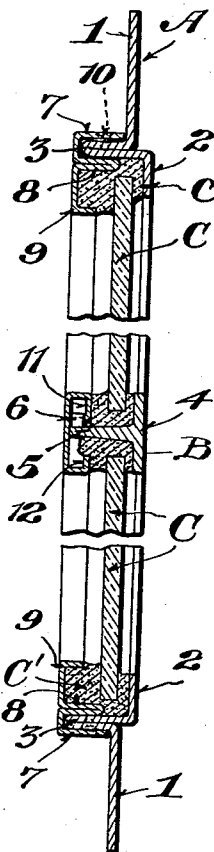


**Fig. 3.**

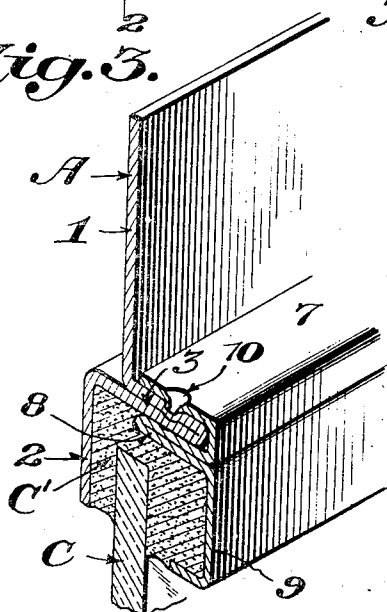
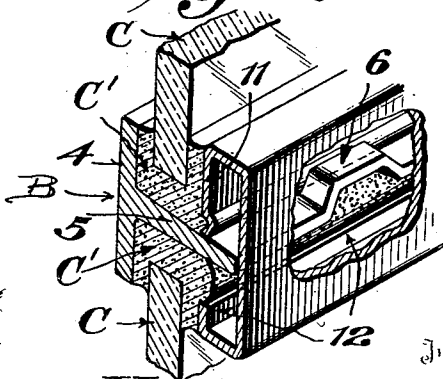


**Fig. 4.**



Inventor  
**Henry Bianco,**

By *Wachsmuth & Groff*  
Attorneys

## UNITED STATES PATENT OFFICE

2,317,581

## GLAZED METAL SASH CONSTRUCTION

Henry Bianco, Baltimore, Md., assignor to  
Truscon Steel Company, Youngstown, Ohio, a  
corporation of Michigan

Application September 11, 1941, Serial No. 410,463

1 Claim. (Cl. 189—76)

This invention relates to a novel construction and arrangement of glazing strips for holding glass panes or panels in metal sash.

One of the objects of the invention is to provide a simple and practical construction wherein the metal sash frame is so constructed as to receive a series of outer glazing strip members which may be locked in position by deforming or indenting one of the flanges or elements thereof at spaced points by means of a center punch or the like, thereby to hold the outer strips in place, while the intermediate strips which cooperate with the muntin bars also have a novel interlocking engagement with preformed holding or keeper elements formed at appropriate positions on the bars.

A further object of the invention is to provide glazing strips which may be readily and easily applied and which may likewise be readily removed if it becomes necessary to reglaze portions of the sash.

With the above and other objects in view which will more readily appear as the nature of the invention is understood, the same consists of the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

A preferred and practical embodiment of the invention is shown in the accompanying drawing, in which:

Figure 1 is a plan view of a sash including glazing strips assembled thereto in accordance with the present invention.

Fig. 2 is a vertical sectional view taken on the line 2—2 of Fig. 1.

Fig. 3 is an enlarged detail sectional perspective view of a portion of one of the window frame bars and the glazing strip therefor.

Fig. 4 is a detail sectional perspective view of one of the muntin bars showing the keeper means for the intermediate glazing strips.

Similar reference characters designate corresponding parts throughout the several figures of the drawing.

According to the embodiment of the invention shown in the drawing, the same includes in its organization a sash frame, designated generally as A, having a plurality of angularly arranged muntin bars B arranged within the frame opening and cooperating with the frame, as will presently appear, to support the glass panes or panels C. The said glass panes or panels are preferably seated or sealed in a suitable mastic composition C' and are held in position by a

series of outer glazing strips D and a plurality of intermediate glazing strips E.

Referring first to the sash frame A, it will be observed that the same comprises a plurality of side frame members which are formed to include the oppositely extending flanges 1 and 2 having therebetween the intermediate offset strip-anchoring flange 3. As will be apparent from Fig. 2, the flanges 1 and 2 are vertically disaligned to provide a shoulder at the outer face of the sash frame for fitting in the window frame proper, while the laterally offset strip-anchoring flange 3 is formed by folding a portion of the metal between the flanges 1 and 2 so that the offset flange itself includes two thicknesses of the metal from which the side frame is formed. The frames at all sides of the sash are of the same cross-sectional shape shown in Fig. 2 and answer to the description given above.

The portion of the sash frame between the inner edges of the side frames is provided with muntin bars B which are arranged in angular relation to form panel or pane receiving seats. The said muntin bars B are preferably of substantially T-shape in cross-section, with the head 4 of the T facing outwardly and the webs 5 thereof projecting inwardly, that is to the room face of the window. The web portions 5 of the muntin bars are preferably formed at spaced intervals with pressed-out or struck-up lug portions 6 which provide glazing strip abutments or shoulders, as will presently appear.

The outer glazing strips D are preferably made from any thin metal suitable for the purpose and are of a cross-sectional formation to provide the spaced, relatively yielding, or resilient, walls 7 and 8 and the covering wall 9. The walls 7 and 8 are intended to telescopically and frictionally fit over and engage the offset flange 3 of the side frame forming members A, and when fully positioned thereon the wall 7 may be subjected to deformation at suitable spaced intervals by the aid of a center punch or the like, thereby to provide mating indentations 10 in both the glazing strip and the sash frame which will prevent accidental displacement of the outer glazing strips in the direction of their application.

The outer glazing strips D are preferably co-extensive in length with the offset flanges 3 of the side frames to which they are applied. As will be observed from Fig. 1, the upper and lower glazing strips D are of greater length than the outer glazing strips at the sides of the sash frame, although it will be readily understood that this

condition may be reversed without affecting the application of the strips to the sash frame.

Intermediate glazing strips E are preferably of substantially channel shape in cross-section and the outer edges of the walls thereof forming the sides of the channel are preferably turned inwardly to form flanges 11 and 12, the former constituting a keeper flange for cooperation with the shoulders provided by the offset lugs 6, or their equivalent, on the muntin bars. The effect of inwardly flanging the side walls of the intermediate glazing strips E is to provide an opening between the edges of the flanges 11 and 12 which permits the fitting of the strips E over the webs 5 of the muntin bars so as to clear the lugs 6 during application. Then, by transversely shifting the entire strip in the direction in which the flange 11 extends, the intermediate strips will become interlocked or interengaged with the muntin bars.

It will, of course, be understood that when the glass panels or panes C are fitted in the openings provided or formed by the side frames and muntin bars, suitable mastic or putty is provided to seal the panes relative to their metallic parts, the said sealing means also being included within and covered by the glazing strips D and E. If it becomes necessary to reglaze a portion of the sash, the outer glazing strips D may be disengaged from the offset flanges 3 of the side frames by lifting the punched in portions of the walls 7 out of the indentations formed in the flanges 3

with the aid of a suitable tool, and likewise the intermediate glazing strips E may be removed by lifting or pushing the same transversely so as to bring the keeper flanges 11 clear of the lugs 6 on the muntin bars.

I claim:

In a metal sash structure, a frame, a pane, said frame including a portion overlapping one face of said pane adjacent to one edge thereof, a flange extending laterally from said frame across said edge of said pane, a pane retaining element including a portion of U-shape in cross section engaged over said flange, a flange extending inwardly from said portion of U-shape in cross section into overlapping relationship to the other face of said pane adjacent to said edge thereof, said portion of U-shape in cross section including side walls and a web joining said side walls, the flange extending inwardly from said portion of U-shape in cross section having its outer face disposed coplanar with the outer face of said web, and means detachably retaining said strip on the lateral flange of said frame, said pane retaining element being formed from a strip of sheet metal having in cross section, its outer marginal portion bent laterally and its medial portion crimped into a double-wall formation extending laterally in the same direction as said outer marginal portion to provide the outer and the inner walls, respectively, of said portions of U-shape in cross section.

HENRY BIANCO.