

March 8, 1932.

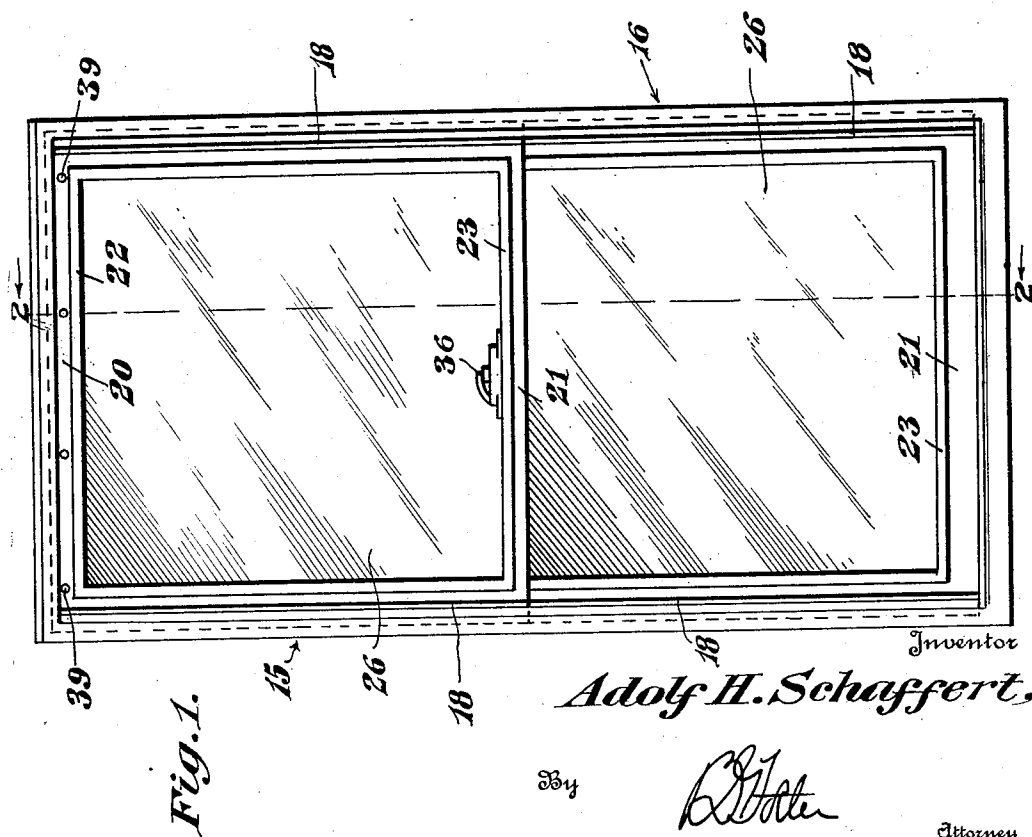
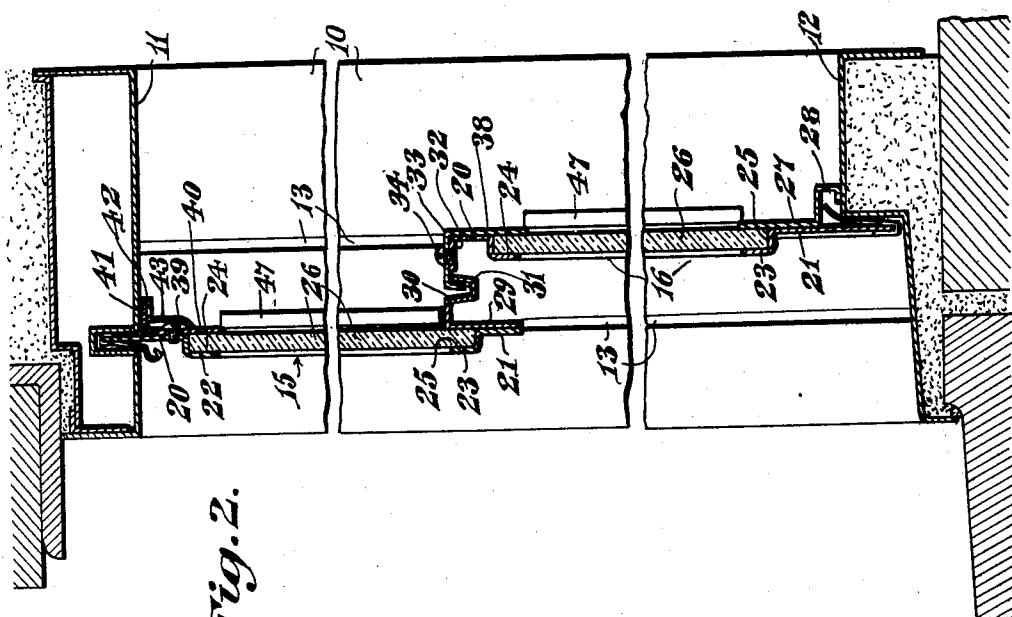
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1,848,907

SCREWLESS GLAZING STRIP WINDOW SASH CONSTRUCTION

Filed Sept. 12, 1930

3 Sheets-Sheet 1



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SCREWLESS GLAZING STRIP WINDOW SASH CONSTRUCTION

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3 Sheets-Sheet 2

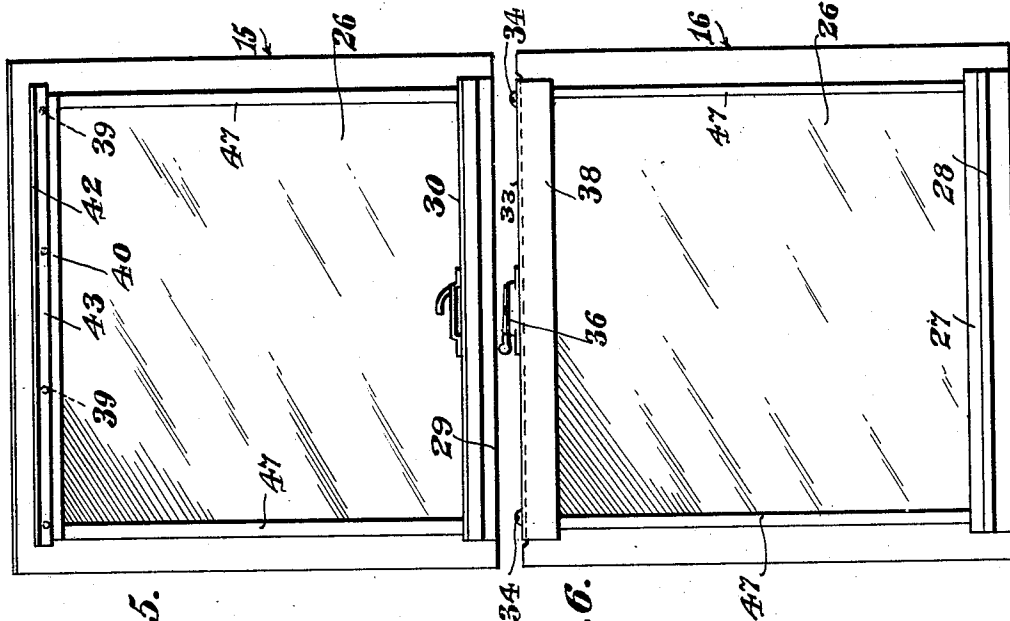


Fig. 5.

Fig. 6.

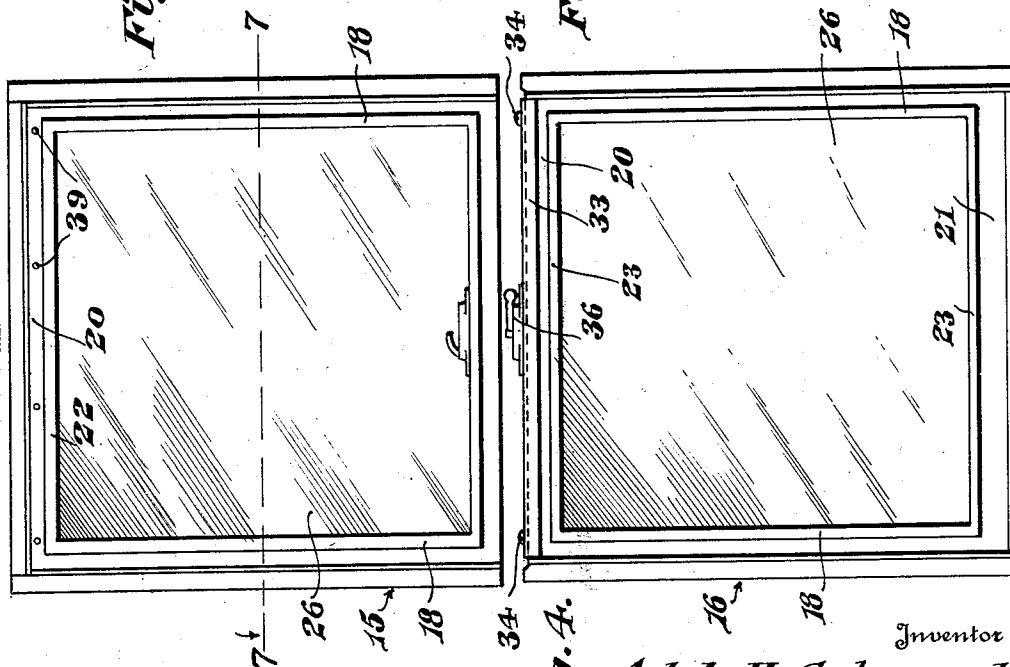


Fig. 3.

Fig. 4.

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Fig. 7.

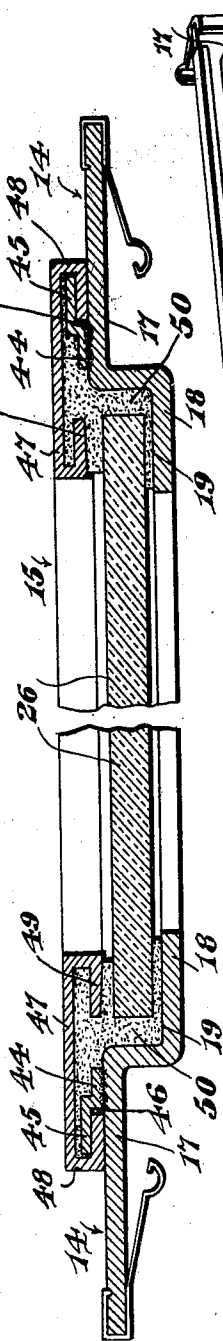


Fig. 8.

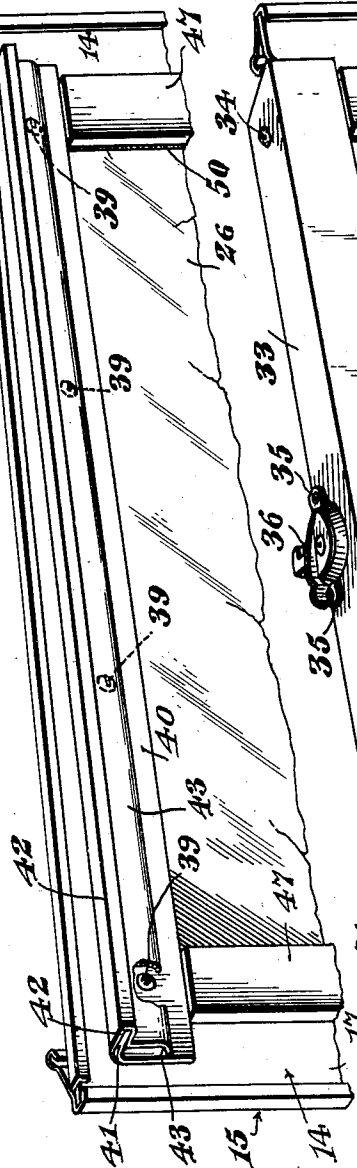
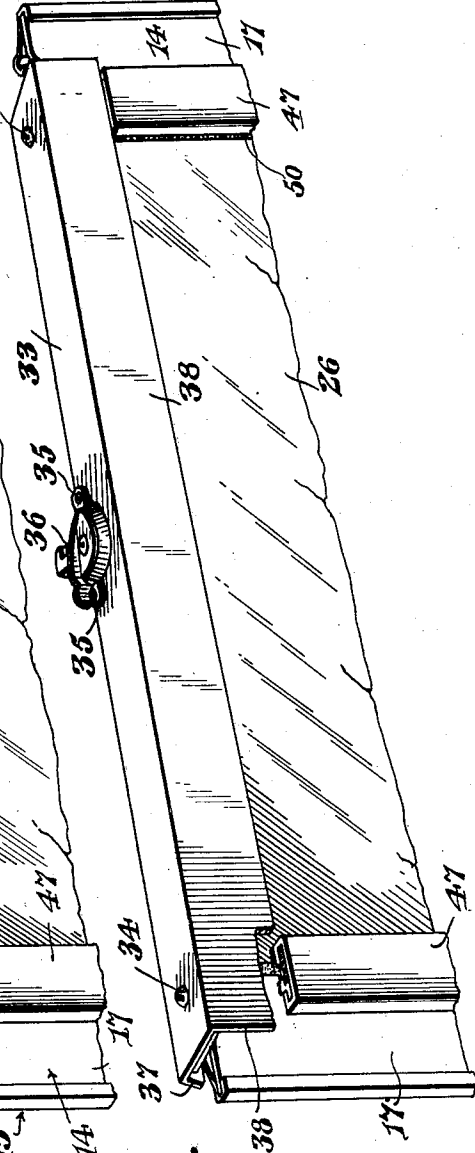


Fig. 9.



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UNITED STATES PATENT OFFICE

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SCREWLESS GLAZING STRIP WINDOW SASH CONSTRUCTION

Application filed September 12, 1930. Serial No. 481,543.

The present invention is addressed in a specific sense to window sashes made of metal and the object is to provide a simple, novel and effective means for holding the glass in place in the frame, said means, furthermore, being so constructed that it acts as an effective retainer for the putty.

In the accompanying drawings:

Figure 1 is a view in elevation of the outside of a window, fronted with a double sliding sash having the improvements applied thereto.

Figure 2 is a sectional view on the line 2—2 of the Figure 1.

Figure 3 is a face view of the outside of the upper sash.

Figure 4 is a similar view of the lower sash.

Figure 5 is an inside face view of the upper sash.

Figure 6 is a corresponding view of the lower sash.

Figure 7 is a horizontal section view taken on the line 7—7 of Figure 3.

Figure 8 is a detailed perspective view on an enlarged scale of the upper end of the upper sash.

Figure 9 is a similar view of the upper end of the lower sash.

In the structure shown a metal window frame is employed having side walls 10, a top wall 11, and a sill 12. The side walls are provided with guide slots 13, in which are engaged the wings or flanges 14 of an upper sash, designated generally by the reference numeral 15, and a lower sash designated 16. As these sashes are generally of the same formation, corresponding parts are given similar reference numerals.

Each sash consists of metal stiles 17, whose outer margins form the said guide wings or flanges 14. These stiles have offset portions 18, providing glass receiving rabbets 19, said rabbets having open sides at the inner side of the stiles 17 (see Fig. 7.) The two stiles 17, are connected by a top rail 20, and a bottom rail 21, which respectively have offset portions 22 and 23, forming open-sided rabbets 24 and 25, for the reception of the upper and lower ends of the glass, 26.

The lower end of the lower sash, 16, has a

plate 27, secured to its lower rail 21, and extending over the open side of the rabbet 25, thereby forming a groove of said rabbet. This plate 27, has an inturned portion 28, constituting a stop for the sash that abuts the sill 12. The lower rail 21, of the upper sash 15, also has a plate 29 secured to it, said plate extending upwardly across the open side of the rabbet 25, to form a groove of said rabbet. This plate is then inturned as shown at 30 and is provided with a longitudinal depression or groove 31. The upper rail 20 of the lower sash 16, has an outwardly turned flange 32 along its upper side and detachably mounted on said flange and covering the said rail 20, is a channeled cap plate 33, held in place by screws 34, and the fasteners 35 of the usual lock or latch 36. This cap plate 33, has along its outer edge a down-turned flange 37, that enters the groove 31, of the plate 29. It also has on its inner side a depending flange 38, that overlies the open side of the rabbet 24.

The upper rail 20, of the upper sash 15, has secured to its inner side by screws 39 or other fasteners a glass retaining plate 40, that overlies the open side of the rabbet 24, of said rail. The upper edge of the plate 40, has an inturned flange 41. Sprung over this flange is a channeled shield 42, of suitable metal having a downwardly extended flange 43, which overlies the heads of the screws 39, and serves to conceal them (see Figs. 2 and 8).

The inner sides of the stiles 17 of each sash have secured thereto, preferably by electric welding, keeper strips 44, which it will be noted are wholly outside the rabbets 19. These strips have inset portions 45, spaced from the stiles 17, forming channels or grooves 46. It will be noted that the offset portions 45 extend away from the rabbets 19. Glass retainer strips 47 overlie the cap strips 44 and 45. Their outer margins are reversely bent into inturned flanges forming hooks 48, that laterally slide into and out of the channels 46, beneath the portions 45 of said cap strips 44. When so engaged, as shown in Figure 3 the said retainer strips extend over the open sides of the rabbets 19, and their inner margins are reversely bent into in-

turned flanges 49, that overlie the margins of the glass and are in line with the portions of the keeper strips 44, which are welded to the stiles 17. The usual putty 50 is placed
5 around the glass and fills into the space between the flanges 49 and keepers 44, thus locking the retainer strips in place and said retainer strips in turn interlocking with the putty and holding the same against dis-
10 lodging.

In glazing the lower sash of the embodiment of the invention disclosed, the cap 33 is detached and the glass retainer strips 47 are removed. The lower edge of the glass 26 is
15 then dropped into the groove 25 of the lower rail 21 and said glass is then swung laterally through the open sides of the rabbets 19 and 24. The putty is then applied and the glass retainer strips 47, are then engaged beneath
20 the portions 45, of the keeper strips and are slid inwardly, the putty being placed so as to be forced into the space within the said retaining strips 47. When the putty hardens the entire structure will be interlocked and
25 held against displacement as will be clear by reference to Figure 7. The cap strip 33 is then placed in position and fastened, thereby securing the glass effectively in place. Similarly the upper sash is glazed. The top re-
30 tainer strip 40, being removed and the glass retainer strips 47, thereof, being detached, thus permit the insertion of the glass after which the parts are returned to position and secured.

25 What I claim is:

1. In a window sash structure, a sash frame having an open sided glass-receiving rabbet, a keeper located on the side of the frame on
40 which the open side of the rabbet is located and having a portion spaced from the frame and extending away from the rabbet, said keeper being located outside the rabbet, and a glass retaining member having a hooked
45 portion that slides laterally parallel to the frame to a position beneath the retainer on the movement of the retaining member toward the rabbet and having a portion extending over the rabbet when the hooked
50 portion is behind the keeper, said frame having an unobstructed portion behind the keeper to permit the glass retaining member to slide toward and from its position over the rabbet and in a path substantially parallel
to the side of the frame.

55 2. In a window sash structure, a frame bar comprising a plate having offset portions, one of which forms the body of the bar, the other being offset therefrom and providing an open sided glass-receiving rabbet along the inner
60 edge of said body portion, a keeper strip on the side of said body portion on which the open side of the rabbet is located and being disposed wholly outside said rabbet, and a glass retaining strip slidable transversely
65 along the face of the body portion into and

out of interlocking relation with the retainer strip and to and from a position over the open side of said rabbet.

3. In a window sash structure, a window sash including a stile formed of a plate hav-
70 ing substantially parallel offset portions, one of which constitutes a guide wing that slides in the frame, the other forming the wall of an open-sided glass-receiving rabbet, a hooked keeper strip carried by the portion
75 of the guide wing and disposed longitudinally along and adjacent to the open side of the rabbet, and a glass-retaining strip that is slidable along the face of the wing portion and engages behind the keeper strip, said re-
80 taining strip when so engaged, projecting over the open side of the rabbet.

4. In a window sash structure, a window sash including a stile formed of a plate hav-
85 ing substantially parallel offset portions, one of which constitutes a guide wing that slides in the frame, the other forming the wall of an open-sided glass-receiving rabbet, a hooked keeper strip carried by the portion of the
90 guide wing and disposed longitudinally along and adjacent to the open side of the rabbet, said keeper strip having its hook portion spaced from the wing and extending away from the rabbet, and a glass-retaining strip
95 having a hook portion along its rear side that is movable along the face of the wing portion and engages behind the keeper strip and extends thereover and over the open side of the rabbet.

5. In a window sash structure, a window
100 sash including a stile formed of a plate having substantially parallel offset portions, one of which constitutes a guide wing that slides in the frame, the other forming the wall of an open-sided glass-receiving rabbet, a
105 hooked keeper strip carried by the portion of the guide wing and disposed longitudinally along and adjacent to the open side of the rabbet, said keeper strip having its hook portion spaced from the wing and extend-
110 ing away from the rabbet, and a glass-retaining strip having a hook portion along its rear side that is movable along the face of the wing portion and engages behind the keeper strip and extends thereover and over the open
115 side of the rabbet, the free side of the glass retaining strip having an inwardly turned portion providing a putty-retaining flange.

In testimony whereof, I affix my signature.

ADOLF H. SCHAFFERT. 120