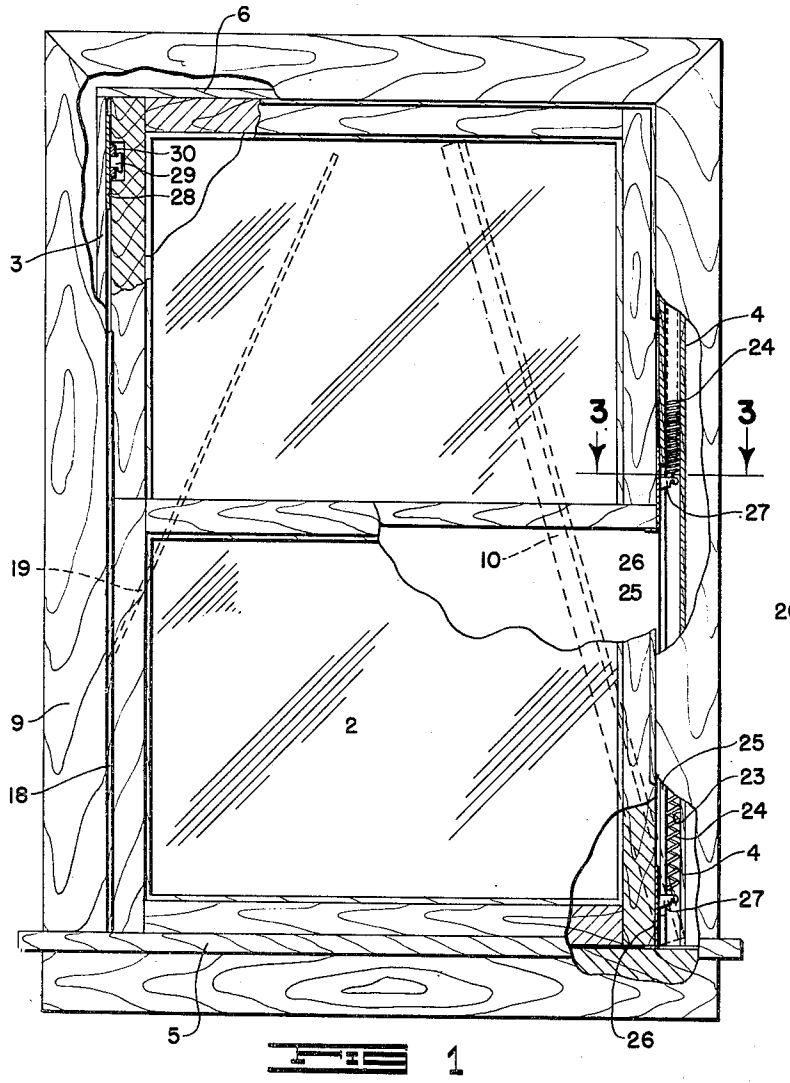
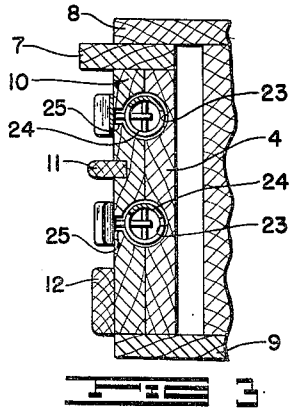
March 13, 1951 P. F. GERKEN 2,545,143

SASH MOUNTING

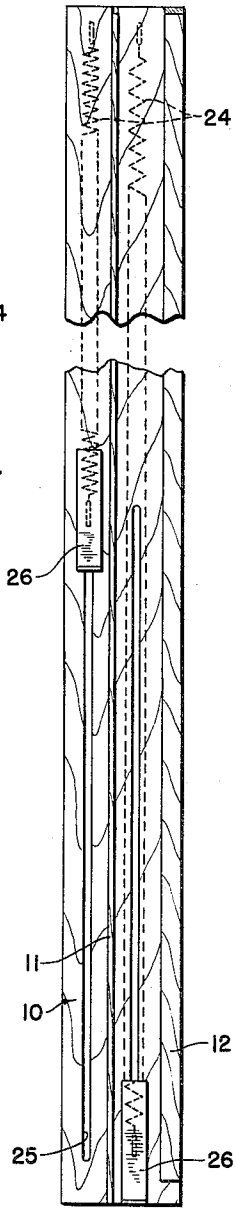
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PAUL F. GERKEN

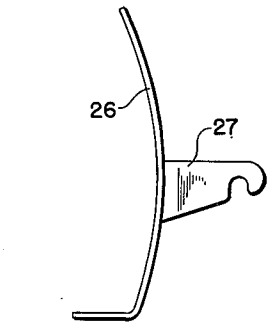
BY Lyon & Lyon

ATTORNEYS

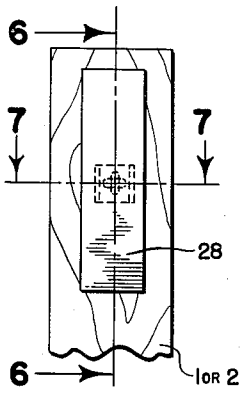
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SASH MOUNTING

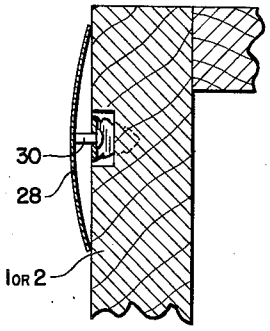
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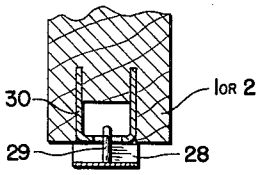
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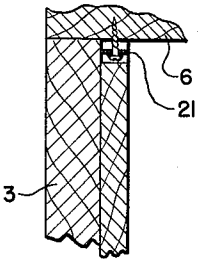
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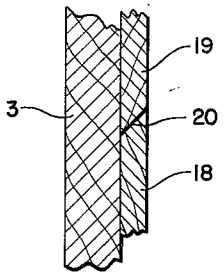


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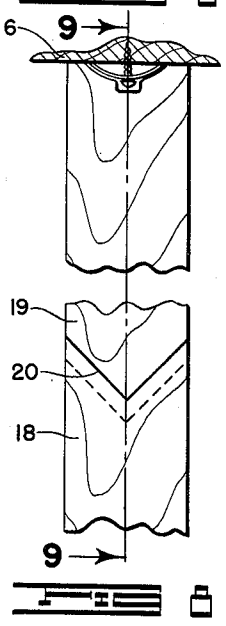


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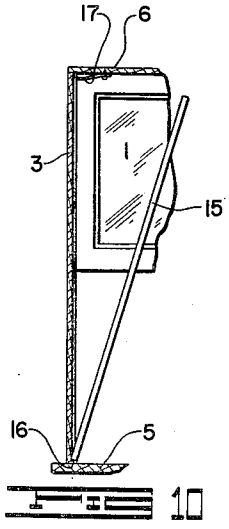




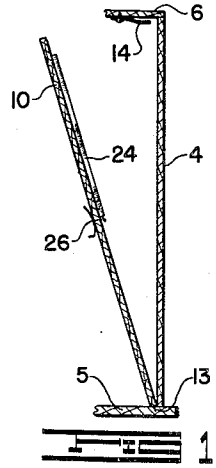
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Patented Mar. 13, 1951

2,545,143

UNITED STATES PATENT OFFICE

2,545,143

SASH MOUNTING

Paul F. Gerken, Reno, Nev.

Application March 15, 1947, Serial No. 734,913

3 Claims. (Cl. 16—202)

1

My invention relates to sash mountings, more particularly to sash mountings for double hung windows, and included in the objects of my invention are:

First, to provide a sash mounting which enables double hung windows to be raised or lowered or adjusted to any position with a minimum of effort.

Second, to provide a sash mounting which is particularly inexpensive to manufacture and readily incorporated in a window frame.

Third, to provide a sash mounting which is so arranged that the window sash may be readily removed for cleaning or repainting, and the sash mounting itself may be readily removed for repair.

Fourth, to provide a sash mounting whereby the bearing corners of double hung window sashes are metal sheathed by novelly arranged bearing plates designed to protect the window sash from wire.

With the foregoing and other objects in view, reference is directed to the accompanying drawings in which:

Figure 1 is an elevational view of a double hung window frame and sash in which my sash mounting is incorporated, portions being broken away and in section to facilitate the illustration.

Figure 2 is an enlarged fragmentary elevational view of the removable side rail which carries the window sash suspension devices forming a part of my invention.

Figure 3 is an enlarged sectional view through 3—3 of Figure 1, showing particularly the removable side rail and the window suspension means, the window sash being omitted.

Figure 4 is a side view of one of the window sash stirrup plates.

Figure 5 is a fragmentary edge view of the upper corner of one of the window sashes showing a bearing plate thereon.

Figure 6 is a fragmentary sectional view thereof taken through 6—6 of Figure 5.

Figure 7 is a fragmentary sectional view thereof taken through 7—7 of Figure 5.

Figure 8 is a fragmentary elevational view of the removable stop employed to permit removal of the window sash.

Figure 9 is a fragmentary sectional view thereof through 9—9 of Figure 8.

Figure 10 is a fragmentary substantially diagrammatical view illustrating the removable separator strip employed to permit removal of the window sashes.

Figure 11 is a similar substantially diagrammatical and sectional view illustrating the manner in which the removable side rail is mounted in the window frame.

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My sash mounting is particularly designed for use in conjunction with double hung window sashes, designated 1 and 2. The window sashes are adapted to slide within a window frame which includes a pair of vertical side rails 3 and 4, sill 5, and a top rail 6.

Stops or guides 7 are provided along the outer edges of the side rails 3 and 4. These serve to guide the outer or normally upper window sash 1. The outer side of the window frame is provided with a suitable outside molding 8 or other conventional trim, and the inner side of the window frame is provided with inside molding 9 or other suitable finish.

The side rail 4 is covered by a removable side rail 10 which carries a fixed separator strip 11 and fixed inner stop 12 so as to define with the outside stop 7 a pair of channels or tracks to guide vertically the window sashes 1 and 2. The lower extremity of the removable side rail 10 is provided with one or more retainer pins 13, adapted to fit into the sill 5, or other removable securing means may be employed. The upper extremity of the removable side rail 10 is releasably retained in place by a leaf spring 14 secured to the top rail 6 and having a free end which tends to bear endwise against the upper portion of the side rail 10, all as shown best in Figure 11.

The opposite side rail 3 is provided with a removable separator strip 15 located between the window sashes 1 and 2. The removable separator strip may be held in much the same manner as the side rail 10; that is, the lower extremity of the separator strip 15 may be provided with a pin 16 or other means for interlocking with the sill 5, and a retainer spring 17 may be employed to latch the upper extremity of the separator strip, all as shown best in Figure 10.

The side rail 3 also carries a divided stop including a fixed lower section 18 and a removable upper section 19. The two sections are provided with confronting V-shaped ends 20 so shaped that the lower end of the upper section wedges behind the lower section. A retainer clip 21 fastened in the top rail 6 retains the removable upper section 19 in place, all as shown in Figures 3 and 9.

The side rail 4 and the overlying removable side rail 10 are provided with mating grooves 23 which form vertical passages adapted to receive coil springs 24 anchored to the upper end of the side rail 10. The lower half of each groove or

passageway 23 is provided with a slot 25 extending through the side rail 10.

A pair of stirrup plates 26 are adapted to ride on the side rail 10. Each stirrup plate is preferably formed of spring material and is normally slightly bowed, as shown in Figure 4. The lower extremity of each stirrup plate is provided with an extension which fits under the window sash 1 or 2, as the case may be. Each stirrup plate thus occupies a position interposed between an edge of its corresponding window and the side rail 10. Each stirrup plate is provided with an arm 27 which extends through the corresponding slot 25 and is attached to the lower or free end of the corresponding spring 24.

The corner of each window sash diagonally from its stirrup plate 26 is provided with a bearing plate 28. Each bearing plate includes a key lug 29 which is adapted to project into and be retained by a fitting 30 secured in the window sash. As shown in Figures 5, 6 and 7, the retainer fitting 30 is in the form of a U-shaped sheet metal member, the legs of which are driven into the window sash and the web of which is provided with a slot so arranged with respect to the key lug 29 that the key lug may be inserted by turning the bearing plate 28 at right angles to the window sash and be retained when the bearing plate is placed parallel with the sash. Each bearing plate 28 is formed of spring material and bowed so as to exert a side pressure on the adjacent side rail.

The side thrust exerted by the bearing plates 28 and stirrup plates 26 is such as to counteract to a large extent the turning moment applied to the window by reason of the fact that the window is supported by one lower corner.

It should be observed however, that in place of the bearing plates 28, two sets of stirrup plates may be used, one under each lower corner of each window sash.

The window sashes may be removed by first removing the upper section 19 of the removable stop, as indicated by dotted lines in Figure 1, then lifting the lower sash 2 until above the fixed lower section 18, whereupon the sash may be pivoted outwardly and slipped from its stirrup plate 26. The upper or outer sash 1 is then removed by first removing the separator strip 15 as indicated in Figure 10. The window sash 1 can then be pivoted and removed. After removing the windows, the side rail 10 may be unlatched and removed. The window is assembled by reversing this procedure.

Many other embodiments of the invention may be resorted to without departing from the spirit of the invention.

I claim:

1. A window sash mounting, involving: a stirrup plate adapted to fit between a window sash and a vertical rail of a window frame, to form a slide bearing, said plate having a shelf extending under and supporting said window sash, and an arm extending through said vertical rail, there being a slot in said rail to accommodate said arm; and a coil spring anchored at the upper portion of said window frame outwardly of said vertical rail and attached to said arm to exert an upward force on said window sash.

2. A window sash mounting, involving: a stirrup plate adapted to fit between a window sash and a vertical rail of a window frame, to form a slide bearing, said plate having a shelf extending under and supporting said window sash, and an arm extending through said vertical rail, there being a slot in said rail to accommodate said arm; a coil spring anchored at the upper portion of said window frame outwardly of said vertical rail and attached to said arm to exert an upward force on said window sash; said stirrup plate being formed of spring material and bowed to exert lateral pressure on said window and said side rail.

3. In a sash mounting for double hung windows having frame structure defining vertical passages opposite at least one side of said windows and slots communicating between said passages and said windows, the combination of: at least one stirrup for each window including a spring plate interposed between an edge of each window and an adjacent member of said frame structure, a supporting lug extending under said window, and an arm extending through one of said slots into the corresponding passage; and a spring in said passage for attachment to said arm to suspend the corresponding window.

PAUL F. GERKEN.

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