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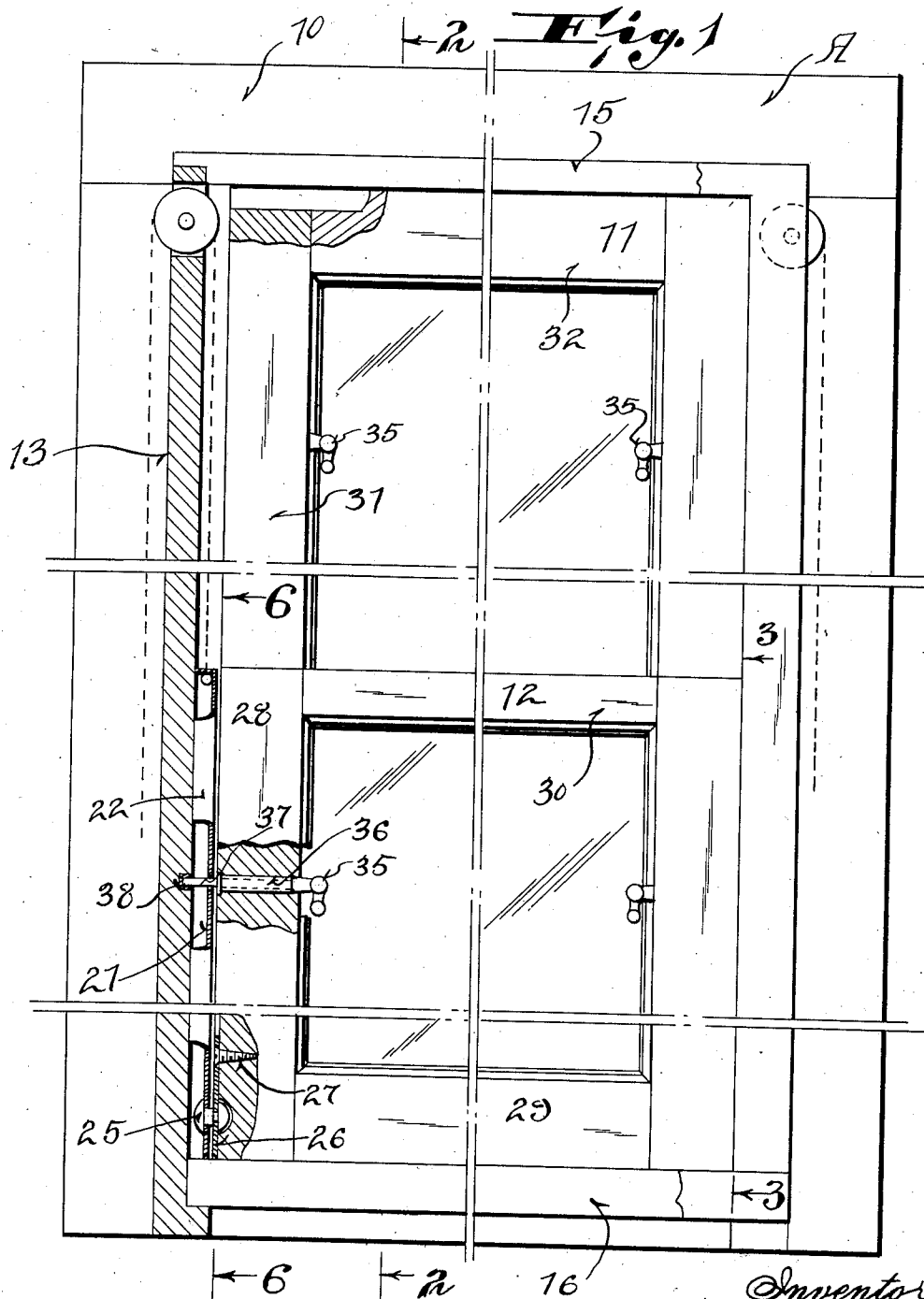
J. R. HOWARD

2,011,319

SWINGING WINDOW

Filed Jan. 30, 1933

3 Sheets-Sheet 1



Inventor
J. R. Howard
By *Harry W. Young*
Attorneys

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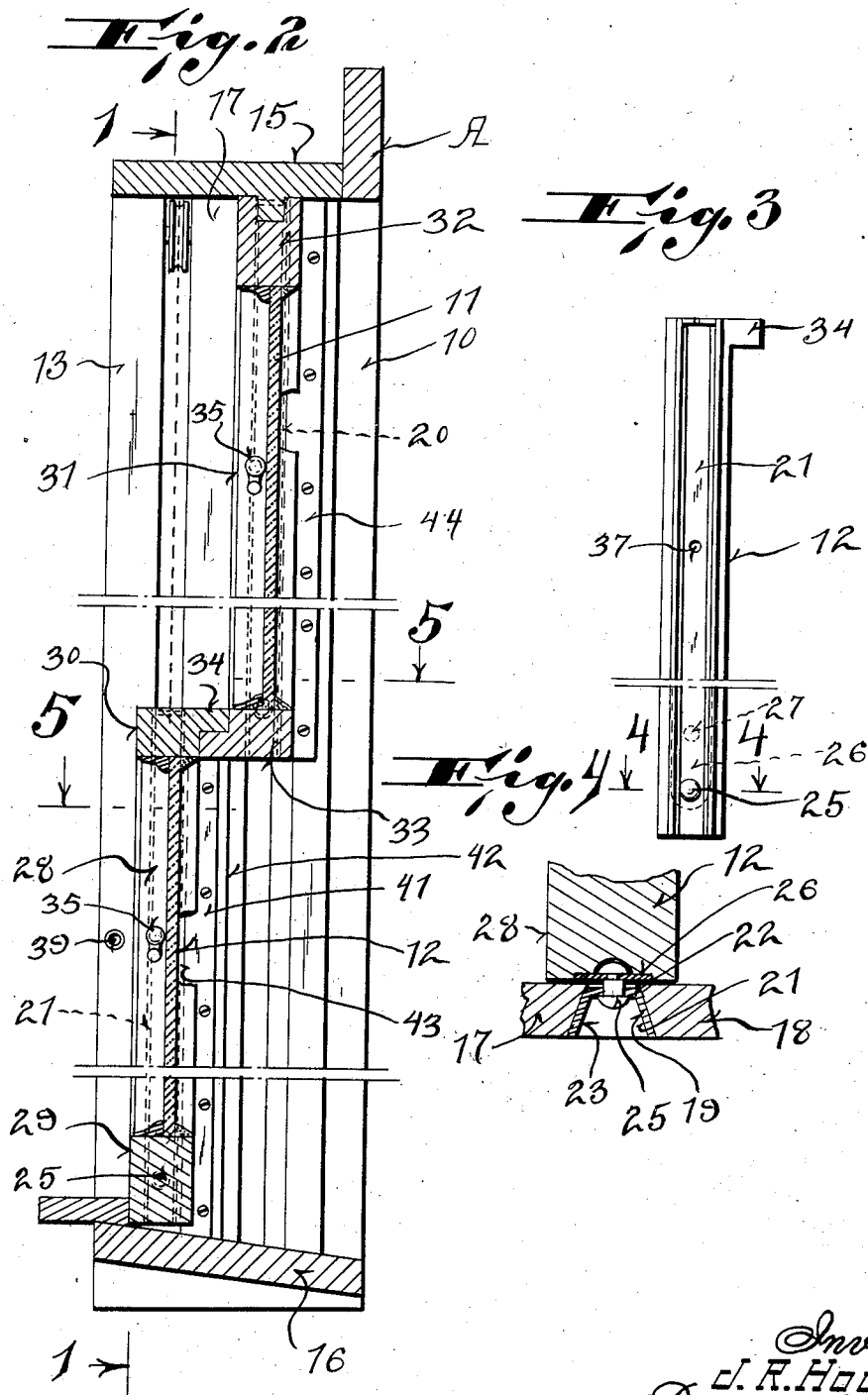
J. R. HOWARD

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SWINGING WINDOW

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3 Sheets-Sheet 2



Inventor
J. R. Howard
By *[Signature]*
Attorneys

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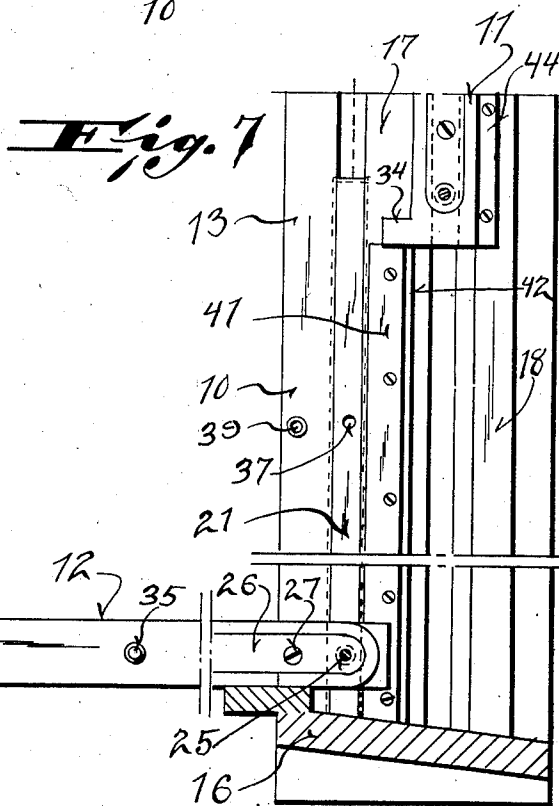
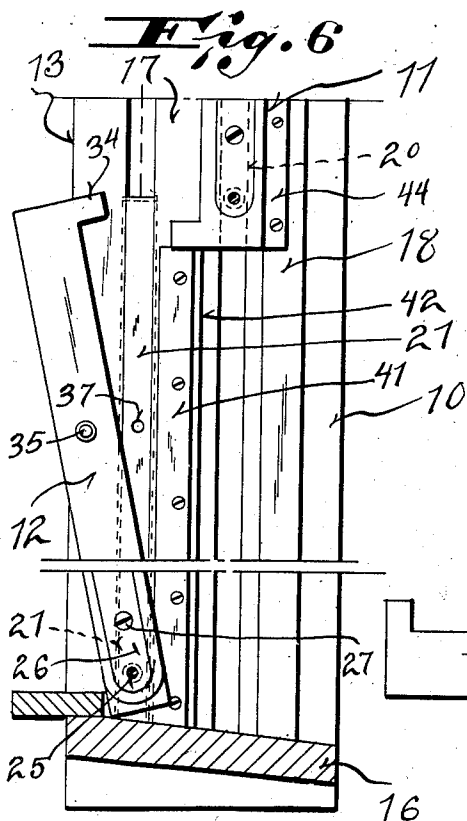
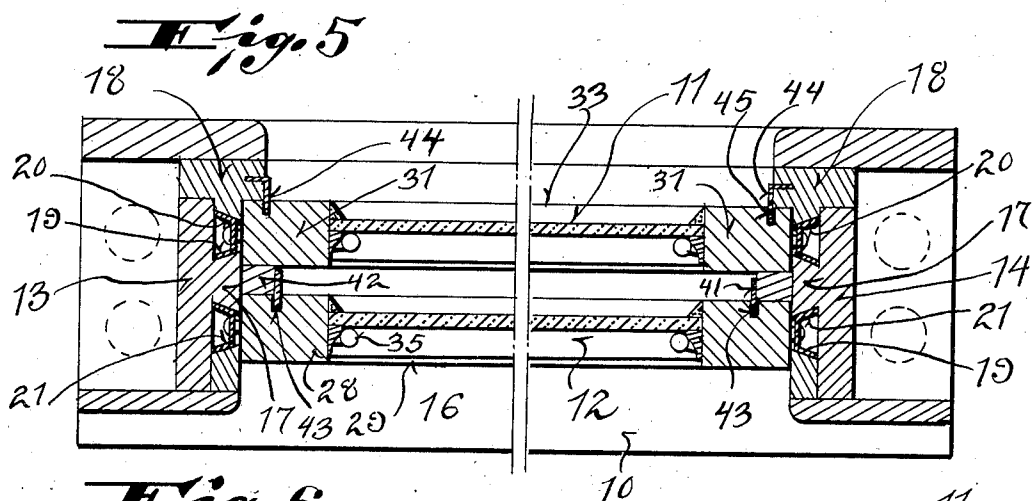
J. R. HOWARD

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SWINGING WINDOW

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3 Sheets-Sheet 3



Inventor
J. R. Howard
By *Wm. D. Hall*
Attorneys

UNITED STATES PATENT OFFICE

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SWINGING WINDOW

Jesse R. Howard, Lima Center, Wis., assignor to
Howard Safety Window, Incorporated, Milwaukee, Wis.

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1 Claim. (Cl. 20—49)

This invention appertains to buildings and more particularly to a novel window construction.

One of the primary objects of my invention is the provision of novel means for mounting the sliding sashes of a window in a window frame, whereby these sashes can be swung into a room and thereby permit the easy cleaning of both faces of the window panes with a minimum amount of difficulty and danger on the part of the cleaner.

Another important object of my invention is the provision of a window embodying sliding sashes so constructed that the sashes can be swung into a room or held in a preferred inclined position to permit the ventilation of a room without danger of the sash being swung to a further open position by unauthorized persons located on the outside of the window.

A further object of my invention is the provision of a novel window embodying slide rails supported by the window frame with window sashes pivotally connected to the slide rails whereby the sashes can be swung into the interior of the room, novel latches being carried by the window sashes, whereby the sashes can be simultaneously locked against swinging movement and sliding movement in conjunction with the slide rails.

A further object of my invention is the provision of novel means for forming the slide rails and novel means for mounting the slide rails on the stiles of the window frame, whereby free sliding movement of the rails is insured without any lateral shifting movement thereof and without danger of displacement of the slide rails when the sashes are in fully open position.

A still further object of my invention is to provide an improved window of the above character, which will be durable and efficient in use, one that will be simple and easy to manufacture and one which can be placed upon the market at a reasonable cost.

With these and other objects in view, the invention consists in the novel construction, arrangement and formation of parts, as will be hereinafter more specifically described, claimed, and illustrated in the accompanying drawings, in which:

Figure 1 is an elevation of a window constructed in accordance with my invention looking from the inside of a room, parts of the window frame and sashes being shown broken away and in section.

Figure 2 is a vertical longitudinal section

through the improved window taken on the line 2—2 of Figure 1 looking in the direction of the arrows.

Figure 3 is an edge elevation of one of the sliding sashes showing the slide rail connected therewith.

Figure 4 is a transverse section taken on the line 4—4 of Figure 3 looking in the direction of the arrows and showing the slide rail mounted between a parting head and stop of the frame stile.

Figure 5 is a transverse section through the complete window taken substantially on the line 5—5 of Figure 2 looking in the direction of the arrows.

Figure 6 is a fragmentary vertical section taken on the line 6—6 of Figure 1 looking in the direction of the arrows showing the lower sash in its partly open position for ventilating purposes.

Figure 7 is a view similar to Figure 6 showing the lower sash in its fully open position and swung into a room either for cleaning or ventilating purposes.

Referring to the drawings in detail, wherein similar reference characters designate the corresponding parts throughout the several views, the letter A generally indicates my improved window construction which comprises a window frame 10 carrying the upper and lower sashes 11 and 12.

The window frame 10 includes the side stiles 13 and 14, the lintel 15 and sill 16. The stiles 13 and 14 are provided with the parting beads 17 and stops 18, which define longitudinally extending guide-ways for permitting the sliding of the sashes. The inner faces of the parting strip or bead 17 and the stops 18 are oppositely inclined as at 19 so as to form guide channels of a substantially dove-tail shape in cross section, for a special purpose, which will be later described.

In accordance with my invention I slidably mount in the guide channels sliding rails 20 and 21, which are of a novel construction. As shown, each of the slide rails 20 and 21 are preferably formed from sheet metal and each include an outer supporting wall 22 and oppositely inclined or flaring side flanges 23 which engage the oppositely inclined faces 19 of the parting strips and beads.

From the description so far, it can be seen that when the sliding rails 20 and 21 are placed in position the same will be confined within their guide channels against lateral shifting movement

and against outward movement but are permitted a free vertical sliding movement.

- As shown, there are two slide rails for each of the sashes and the lower terminals of the bottom pair of slide rails support pivot pins 25 which are carried by face plates 26 connected by means of fastening elements, such as screws 27, to the outer faces of the side rails 28 of the lower sash 12. The upper pair of slide rails carry similar pivot pins which are supported by face plates connected with the upper sash 11 adjacent to its lower end. By this arrangement the sashes can be swung on their slide rails to any desired angle into a room.
- As shown, the bottom sash 12 includes the side rails 28, the bottom rail 29, and the top or meeting rail 30. The upper sash 11 is formed similar and includes the side rails 31, the top rail 32 and the bottom or meeting rail 33. The meeting rails 30 and 33 of the sashes are preferably provided with overlapping beads or fingers 34 so that a weather tight connection will be had between the sashes when the same are in their fully closed position.
- Both of the sashes are counter-balanced in any desired way, so as to permit the free sliding movement thereof and if preferred, the usual sash weights can be employed for this purpose. From the description so far it is obvious that the sashes can be raised and lowered through the medium of the slide rails 20 and 21 and can also be swung at an angle relative to the window frame and the slide rails through the medium of the pivot pins.
- I have provided novel means for locking the sashes both against sliding and swinging movement and this means includes latch bolts 35 slidably mounted in casings 36 anchored in the side rails of the window sashes. The slide rails 20 and 21 are provided with keeper openings 37 through which the latch bolts are adapted to extend so that the sashes and the slide rails 20 and 21 can be moved as a unit. The stiles 13 of the window frame 10 can be provided with keeper sockets 38 and the inner ends of the latch bolts are adapted to extend through the slide rails and into the keeper sockets 38, so that the window sashes can be held against sliding movement.
- I also utilize the latch bolts 35 for the lower sashes as a means for holding the lower sash in an angular position relative to the window frame for ventilating purposes. Thus, the stiles 13 of the window frame beyond the innermost stop can be provided with keeper sockets 39 and when the lower sash is swung on its pivot pins 25 and the latches are disengaged from the keeper sockets

38, the latches can be moved into engagement with the keeper sockets 39. This allows the circulation of air between the sashes and at the same time prevents the further opening of the lower sash by unauthorized persons.

When it is desired to swing the sashes further into the room to permit the opposite faces of the window pane carried by the sashes to be washed, the latches 35 are moved from out of engagement with the keeper recesses 39 and the sashes are further tilted.

I have provided novel means for insuring the provision of a weather tight window construction and this means includes weather strips 41 which can be secured to the parting beads 17. As shown, the weather strips 41 can be carried by the inner faces of strips 42 which can be secured to the said parting beads. The weather strips project beyond the inner faces of the supporting strips 42 and are adapted to be received within longitudinal grooves 43 formed in the inner faces of the side rails 28 of the lower sash. Similar weather strips 44 are carried by the outer stops 18 of the window frame and these weather strips are also adapted to be received in longitudinal grooves 45 formed in the outer faces of the side rails 31 of the upper sash 11.

From the foregoing description, it can be seen that I have provided an improved window construction in which the sashes can be raised or lowered in the ordinary manner or which can be swung into a room either for ventilating or washing purposes.

Changes in details may be made without departing from the spirit or the scope of this invention but what I claim as new is:

In a window construction, a window frame including stiles having longitudinally extending, spaced, parallel guide channels, the side walls of the guide channels converging toward their outer longitudinal edges, upper and lower pairs of slide rails mounted in said guide channels, each of said slide rails being of a substantially V-shape in cross section and including diverging side walls for engaging the converging side walls of the channels, whereby to prevent lateral shifting movement of the slide rails, window sashes received in the frame, horizontally disposed pivot pins connecting the lower ends of the sashes to the lower ends of the slide rails, the slide rails constituting housings for the inner heads of the pivot pins, the window sashes extending over the guide channels and slide rails, and a parting bead carried by the stiles disposed between the window sashes.

JESSE R. HOWARD.