March 20, 1928.

R. BENZENBERG

1,663,188

PIVOTED WINDOW

Filed July 28, 1927

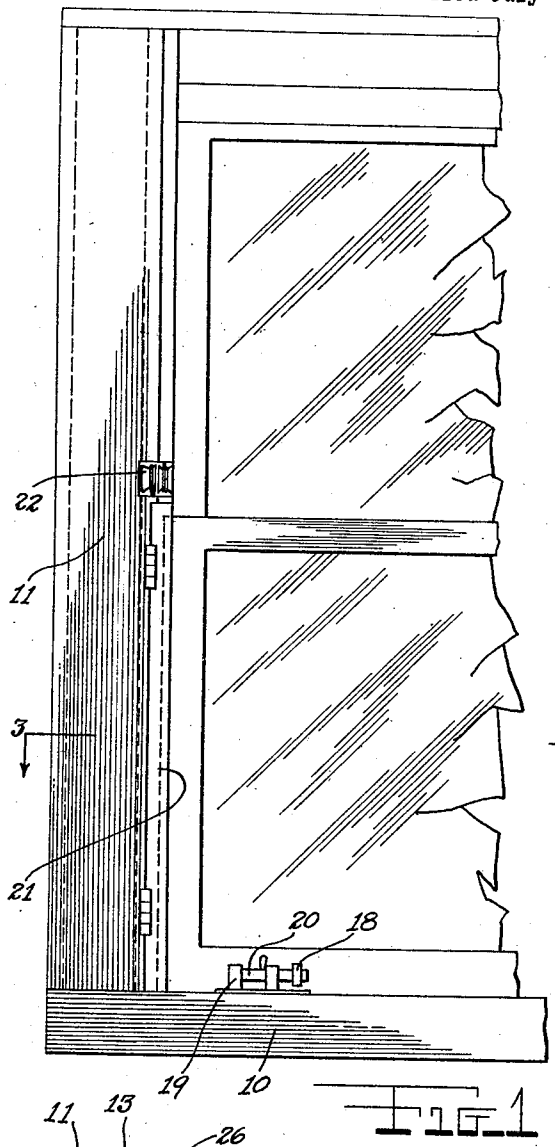

FIG. 1

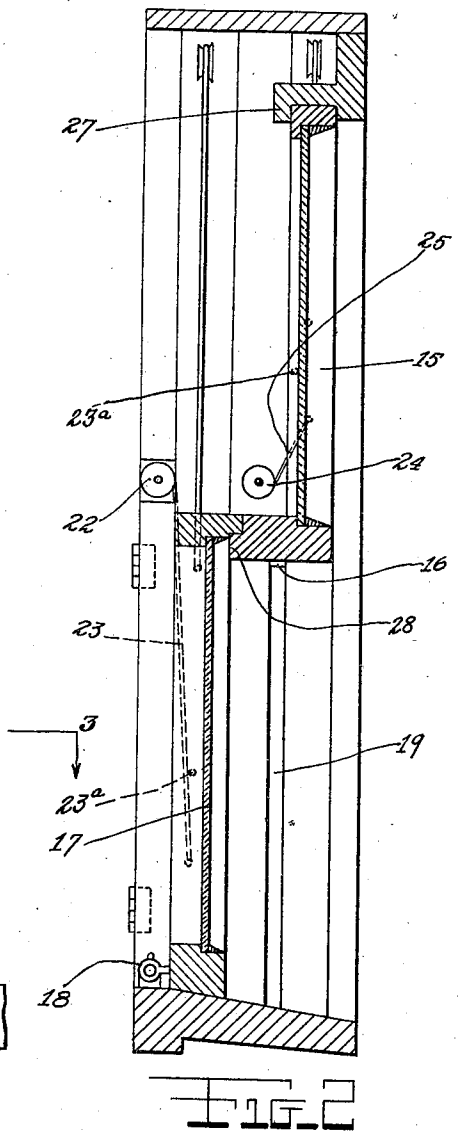

FIG. 2

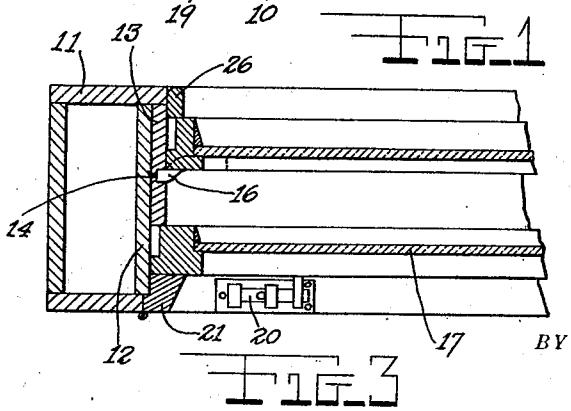

FIG. 3

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UNITED STATES PATENT OFFICE.

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PIVOTED WINDOW.

Application filed July 28, 1927. Serial No. 208,975.

The main object of this invention is the provision of a novel window construction which permits the inward rotation of both glass panels of the usual type of window, whereby cleaning the windows is simplified and replacing a broken pane of glass may be more easily accomplished.

Another object of the invention is the provision of means whereby both the upper and lower sashes may be pivoted to the window frame in order to permit the sashes to be swung inwardly about the lower edges.

Still another object of this invention is the provision of means for suspending the free ends of the sashes when the latter are swung about their pivots.

The above and other objects will become apparent in the description below in which characters of reference refer to like-named parts in the drawing.

Referring briefly to the drawing, Figure 1 is a front elevational view of a window of the usual type partly broken away.

Figure 2 is a cross sectional elevation of the window.

Figure 3 is a cross sectional view taken on line 3—3 of Figure 1.

Referring in detail to the drawing, the numeral 10 represents the base or sill of a window frame having hollow side columns 11 in which the usual sashweights are contained. Against the wall 12 of the column 11 on each side of the frame, a strip 13 is mounted and is provided with a vertical slot 14 extending the length of the strip. The upper window 15 is provided at both ends of its lower edge with S-shaped lugs 16 extending outwardly and downwardly to register in the slots 14.

The lower window 17 is provided at each side of the lower edge with protruding eyelets 18. On each side of the sill 10 a latch 19, having a sliding bolt 20, is mounted, the bolt being slidable into and out of engagement with the eyelet 18. On the lower half of each column 11 a shield 21 is hingedly attached, adapted to be swung to release or to lock the lower window in the frame. This shield in locked position lies against the side members of the lower window frame and retains the latter in vertical position. It is to be noted that the edge of the shield, which lies against the window, is of a greater area than the front edge in order to further assure retention of the window in vertical position by the shield. A coiled spring drum 22 is mounted against the column 11 on each side of the frame and thereon is wound a cable 23 attached to the upper edge of the lower window 17. A similar drum 24 is wound with a cable 25 attached to the upper edge of the upper window 15.

The operation of the device is as follows: Assuming that the windows are in the positions shown in Figure 1 and it is desired to swing them in for the purpose of cleaning, the shields 21 are first swung away from the lower window 17 and the slide bolts 20 are inserted into the eyelets 18. This window is thereupon free to be swung inward into the room and after this is done the cables 23 run wide from the drums 22, and when in its extreme position this window will be supported by these cables. After the window has been cleaned it is swung back into vertical position, the bolts 20 are withdrawn from the eyelets 18 and the shields 21 are swung back against the vertical edges of the window frame. The lower window is then raised to its extreme position. In order to clean the upper window it is first slid down to its extreme lower position and the shields 21 are again swung back from the window frame. The window 15 is then grasped at its upper edge and swung into the room about the lugs 16 in the slots 14, said lugs providing the pivot for the swinging motion. The upper window is supported by the cables 25 in the same manner as the lower window when it has been swung to its extreme position. To restore the position of this window after cleaning it is simply swung back to vertical position and raised, after which the lower window is drawn down to the lower portion of the frame and the shields 21 are swung back against the lower window. It is to be noted that the rear window is supported against rotation in an outward direction by vertical support strips 26, and in its extreme upper position is retained against inward rotation by the overhanging tongues 27 of the window frame. In all positions, excepting when the lower window 17 is in its uppermost position, the upper window 15 is prevented from rotation inwardly by contact of the edge 28 of the lower frame of the window 15 against the frame 17. Both the upper and lower windows have pins 23ª projecting from the sides thereof. These pins are anchored to the window frames above the place where the members 23 and

25 are anchored to their respective window frames and when these windows are in the lowered portion of the window frame the members 23 and 25 bent about the pin and permit the window sashes to be suspended from these cables.

Obvious changes in form and construction may be made without departing from the spirit and scope of the invention.

What is claimed is as follows:

1. In window construction means for pivoting the window sash on the window frame comprising an eyelet on the sash and a slide bolt on the frame adapted to engage said eyelet, and means for normally retaining the sash in vertical position.

2. In window construction means for pivoting the window sash on the window frame comprising an eyelet on the sash and a slide bolt on the frame adapted to engage the eyelet, and means for normally retaining the window in vertical position, comprising a vertical shield pivoted to the side of the window frame, and adapted to be swung from or against the window sash

3. In window construction means for pivoting the window sash on the window frame comprising an eyelet on the sash and a slide bolt on the frame adapted to engage said eyelet, and means for normally retaining the sash in vertical position, and means for supporting the sash after it has been swung out of vertical position.

4. In window construction means for pivoting the window sash on the window frame comprising an eyelet on the sash and a slide bolt on the frame adapted to engage the eyelet, and means for normally retaining the window in vertical position, comprising a vertical shield pivoted to the side of the window frame, and adapted to be swung from or against the window sash, and means for supporting the sash after it has been swung out of vertical position comprising drums pivotally mounted on the window frame, cables wound on said drums, said cables attached to the sash.

In testimony whereof I affix my signature.

RUDOLF BENZENBERG.