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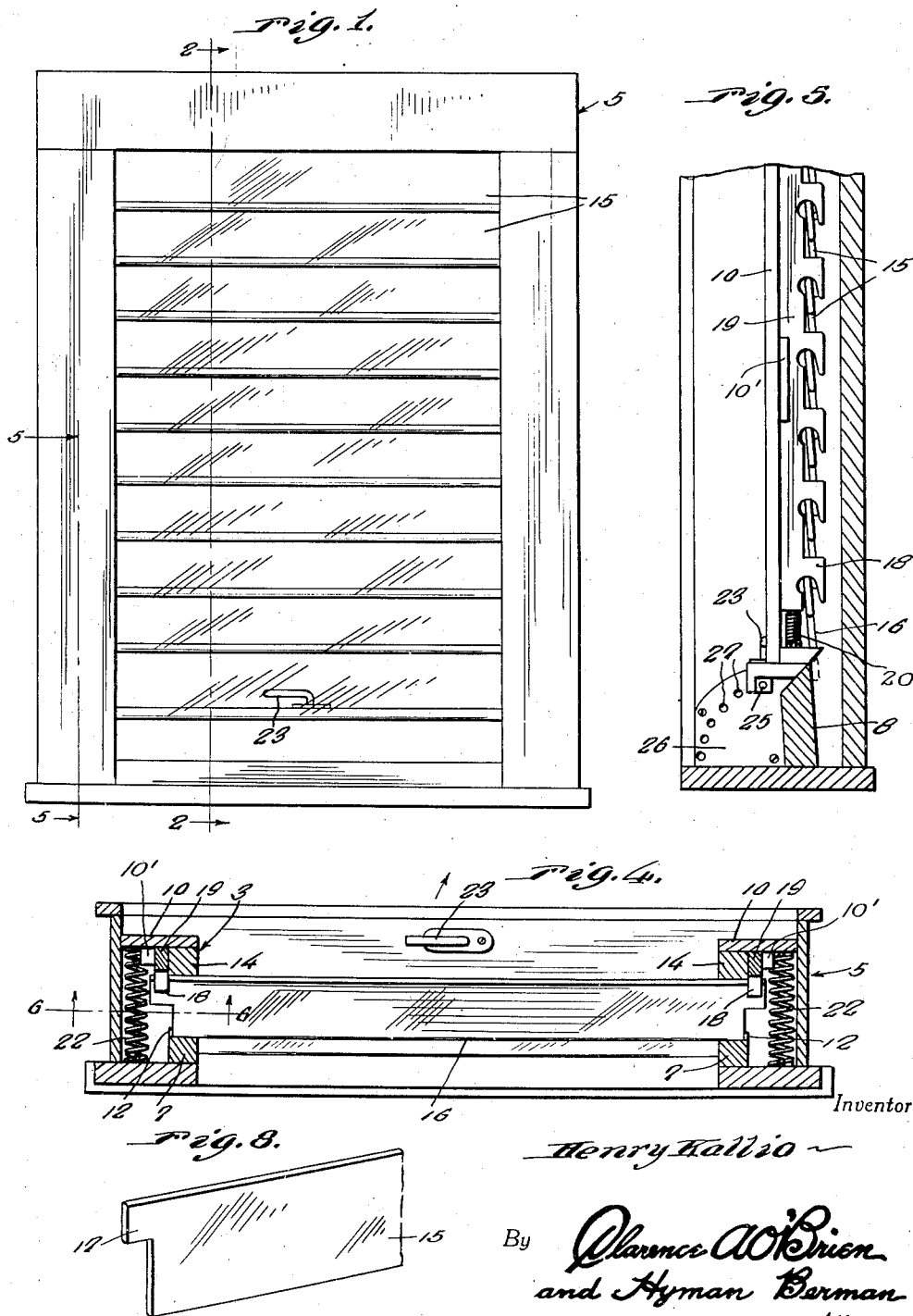
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WINDOW

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WINDOW

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5 Claims. (Cl. 20-53)

This invention relates to windows of the type used in building construction, such as houses, office buildings and the like, and an object of the invention is to provide a window so equipped as to give desired ventilation without draft, and without, of course, detracting from the light-admitting capabilities of the window.

In accordance with the present invention a window is provided that can be adjusted to any degree within reason between a fully opened and a fully closed position for providing the desired ventilation.

The invention together with its objects and advantages will be best understood from a study of the following description taken in connection with the accompanying drawings wherein:

Figure 1 is an elevational view of the window looking at the same from the outer side thereof.

Figure 2 is a longitudinal sectional view taken substantially on the line 2-2 of Figure 1.

Figure 3 is a view similar to Figure 2 but with the window in an open position of adjustment.

Figure 4 is a horizontal sectional view through the window in open position of adjustment.

Figure 5 is a detail sectional view taken substantially on the line 5-5 of Figure 1.

Figure 6 is a detail sectional view taken substantially on the line 6-6 of Figure 4.

Figure 7 is a perspective view of the bottom or lowermost transparent slat, and

Figure 8 is a similar view of a second form of slat used in accordance with this invention.

Figure 9 is a fragmentary detail view showing two of the side members formed with the seats for the slats.

Figure 10 is a view of the upper latch means.

Referring more in detail to the drawings, it will be seen that 5 indicates generally a window casing that is more or less of conventional type and structure.

In accordance with the present invention there is fixedly mounted in the window casing 5 a frame 4, embodying a top rail 6, side rails 7, and a bottom or base rail 8.

Also mounted within the casing 5 for movement vertically and also horizontally toward and away from the frame 4 is a shiftable frame 3, embodying a top rail or frame member 9, side rails 10, and a bottom or base rail 11.

Each of the side rails 7 of the first-mentioned frame indicated generally by the reference numeral 4, is notched at intervals to provide on the inner face of each side rail 7 a vertical series of spaced shoulders 12 that complement shoulders 13 provided on vertical cleats 14 suitably mount-

ed on and secured to the side members 10 of the second-mentioned frame, and designated by the reference numeral 3.

Between each pair of shoulders of a side member 14 the inner edge of said member slopes upwardly and towards the unnotched edge of the member to form a seat 13' for an end of a slat and between each pair of shoulders 12 of each side member 7 the edge of said member 7 slopes upwardly and towards the member 14 to provide a sloping seat 12' for an end of a slat. These slats are shown at 15 and 16, the slat 16 being the lowermost one and these slats are of preferably transparent material such as glass. As shown the ends of the slats at the lower edges engage the lower shoulders 12 and at their upper edges the shoulders 13 with said ends of the slats resting upon the seats 12' and 13' when the device is closed. Said slats 15 and 16 have their ends extended as at 17 for engagement with hook-like lugs 18 provided on pressure bars 19 suitably mounted on the side rails 10 of frame 3 adjacent to and paralleling the cleats 14. The pressure bars 19 have limited sliding movement on the frame rails 10 between the blocks 10' attached to the rails 10, and cleats 14 and said bars 19 are yieldably urged downwardly for maintaining positive frictional engagement of the keeper lugs 18 with the slats 15 and 16, through the medium of coil springs 20 suitably anchored on the frame 3 adjacent the bottom thereof and secured to the lower ends of the pressure bars 19.

The frame 3 and associated parts are normally urged into the window-closing position shown in Figure 2, or in other words towards the frame 4 through the medium of upper and lower pairs of suitably provided coil springs 21, 22. The springs 21, 22 at one end are suitably anchored to the casing 5 and at an opposite end are suitably secured to the side members 10 of the aforementioned frame 3.

To facilitate manipulation of the frame 3 and associated parts for positioning the slats 15 and 16 at the desired angle, or in other words for placing the window in the desired position of adjustment, there is provided on the bottom member 11 of the frame 3 a handle member 23 and on the top member 9 of the frame 3 a handle 28.

From the above it will be seen that when the window is in the fully closed position suggested in Figure 2, the slats 15 and 16 overlap one another with the lowermost slat 16 overlapping the bottom rail 8 of the fixed frame 4. Also, it will be apparent that the ends of the slats are neatly accommodated between the cleats 14 and the

side rails 7 so that, when the window is in a fully closed position, no air from the outside will be permitted to escape through the window into the room. Consequently a substantially air-tight window is presented.

To open the window the operator by grasping, for example, the handles 23 and 28 pulls the frame 3 inwardly away from the frame 4 and downwardly to, for example, the position shown in Figure 3 for positioning the slats 15 and 16 as therein shown, whereby to permit proper ventilation.

Any suitable means may be provided for securing the frame 3 and associated parts in the desired position of adjustment. In the present instance such means is shown as consisting of slidable bolts 25 suitably connected at their inner ends with the aforementioned handle 23 to be projected or retracted incidental to a proper turning movement of the handle 23. The bolts 25 are slidably mounted on the rail member 11 of the frame 3, and for cooperation with these bolts there are suitably mounted within the window casing 5, at the base thereof, segmental keeper plates 26 provided with series of apertures 27 with which the outer or free ends of the bolts are engageable in an obvious manner.

Also to positively secure the window in a closed condition, the handle member 28 is formed integral with a pivoted latch member 28' that is co-operable with a keeper plate 29 suitably mounted on the top member of the casing 5 interiorly of the casing as will be clear from a study of Figures 2 and 3.

It will also be noted that the upper edge of the frame member 8 and the outer edge of the frame member 11 are beveled or otherwise complementarily formed as at 29 and 30, respectively, so as to nicely contact when the window is in a fully closed position, thus further insuring against "draft" when the window is in said closed condition.

Also to limit relative movement of the frame 3 there are provided at opposite sides of the casing 5 lengths of chain or the like 30', anchored at one end to the sides of the window casing 5, interiorly of the casing, and suitably secured at the other end thereof to the side members 10 of the frame 3.

It will be apparent that a window embodying the features of construction, such as herein described, can be opened to practically any position of adjustment for admitting into the interior of the room or building the desired amount of air without causing draft.

It is thought that a clear understanding of the construction, utility and advantages of a window embodying the features of the present invention will be had without a more detailed description.

Having thus described the invention what is claimed as new is:

1. In a window structure, a stationary frame, a movable frame, each frame including spaced vertically arranged side members, the adjacent side edges of the side members of the two frames having a plurality of sloping seat forming portions thereon, such portions of one frame forming upper shoulders and those of the other frame forming lower shoulders, with the seat forming portions of one frame overlapping those of the other frame, slats extending across the frames and having their ends extending between the side members of the two frames with each slat having the upper edge of each end engaging an upper shoulder of one frame and its lower edge en-

gaging a lower shoulder of the other frame with the ends of the slats engaging the seats of the two frames when the frames are in contact with each other and with the upper and lower edges of the slats overlapping and means for adjusting one frame toward and away from the other frame to open and close the slats, the shoulders forming bearing means for the edges of the ends of the slats during movement of one frame relative to the other.

2. In a window structure, a stationary frame, a movable frame, each frame including spaced vertically arranged side members, the adjacent side edges of the side members of the two frames having a plurality of sloping seat forming portions thereon, such portions of one frame forming upper shoulders and those of the other frame forming lower shoulders, with the seat forming portions of one frame overlapping those of the other frame, slats extending across the frames and having their ends extending between the side members of the two frames with each slat having the upper edge of each end engaging an upper shoulder of one frame and its lower edge engaging a lower shoulder of the other frame with the ends of the slats engaging the seats of the two frames when the frames are in contact with each other and with the upper and lower edges of the slats overlapping and means for adjusting one frame toward and away from the other frame to open and close the slats, the shoulders forming bearing means for the edges of the ends of the slats during movement of one frame relative to the other, spring means tending to hold the two frames in contact and latch means for holding the movable frame in adjusted position and spaced from the other frame.

3. In a window structure, a stationary frame, a movable frame, each frame including spaced vertically arranged side members, the adjacent side edges of the side members of the two frames having a plurality of sloping seat forming portions thereon, such portions of one frame forming upper shoulders and those of the other frame forming lower shoulders, with the seat forming portions of one frame overlapping those of the other frame, slats extending across the frames and having their ends extending between the side members of the two frames with each slat having the upper edge of each end engaging an upper shoulder of one frame and its lower edge engaging a lower shoulder of the other frame with the ends of the slats engaging the seats of the two frames when the frames are in contact with each other and with the upper and lower edges of the slats overlapping and means for adjusting one frame toward and away from the other frame to open and close the slats, the shoulders forming bearing means for the edges of the ends of the slats during movement of one frame relative to the other, spring means tending to hold the two frames in contact and latch means for holding the movable frame in adjusted position and spaced from the other frame, and flexible means connecting the two frames together and limiting movement of the movable frame away from the other frame.

4. In a window structure, a casing, a stationary frame in the casing, a movable frame in the casing, each frame including a pair of spaced side members, the side members of the two frames having a plurality of sloping seat forming portions thereon arranged in vertical rows with the seat forming portions of one frame terminating

in upper shoulders and the seat forming portions of the other frame terminating in lower shoulders and the seat forming portions of one frame overlapping those of the other frame, transparent slats extending across the frame with their ends entering the spaces formed by the seat forming parts of the two frames with the upper edges of said ends engaging the upper shoulders and the lower edges engaging the lower shoulders and said ends engaging the seats when the two frames are in contact, spring means connecting the movable frame with the casing and acting to hold the movable frame against the stationary frame, said slats having projections at their ends, vertical bars having hooks thereon engaging the projections on the ends of the slats, means for supporting the hook carrying bars for sliding movement, spring means for holding the bars in lowered position and latch means for holding the movable frame in adjusted position.

5. In a window structure, a casing, a stationary frame in the casing, a movable frame in the casing, each frame including a pair of spaced side members, the side members of the two frames having a plurality of sloping seat forming portions thereon arranged in vertical rows with the

5 seat forming portions of one frame terminating in upper shoulders and the seat forming portions of the other frame terminating in lower shoulders and the seat forming portions of one frame overlapping those of the other frame, transparent slats extending across the frame with their ends entering the spaces formed by the seat forming parts of the two frames with the upper edges of said ends engaging the upper shoulders and the lower edges engaging the lower shoulders and said ends engaging the seats when the two frames are in contact, spring means connecting the movable frame with the casing and acting to hold the movable frame against the stationary frame, said slats having projections at their ends, vertical bars having hooks thereon engaging the projections on the ends of the slats, means for supporting the hook carrying bars for sliding movement, spring means for holding the bars in lowered position and latch means for holding the movable frame in adjusted position, the lower members of the two frames having beveled edges contacting each other when the movable frame is contacting the stationary frame.

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