

(No Model.)

H. C. FUHLMANN.
WINDOW.

No. 583,595.

Patented June 1, 1897.

Fig 1

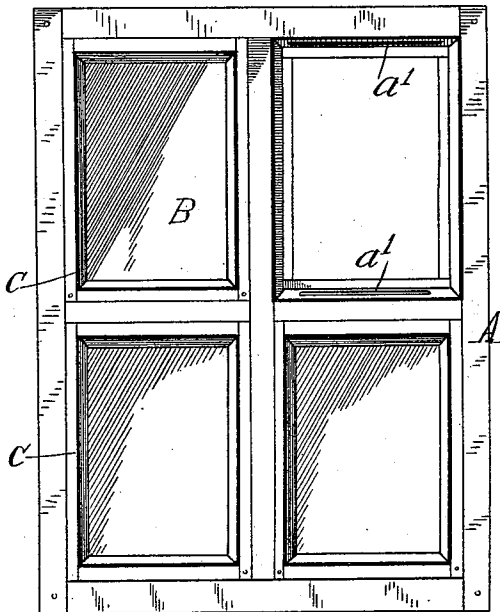


Fig 2

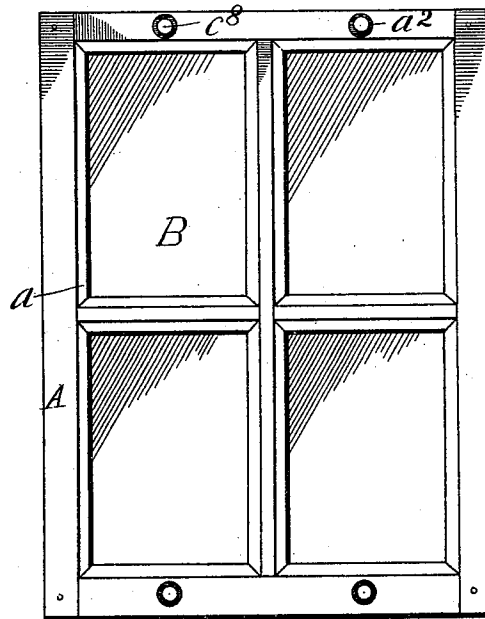
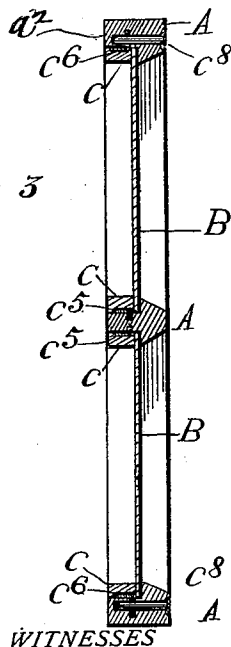


Fig 3

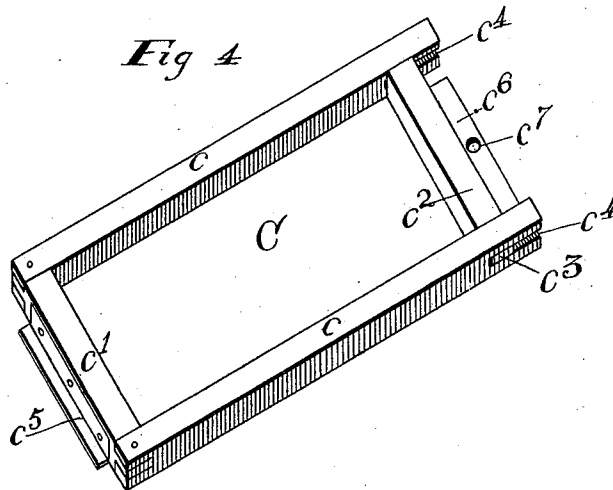


WITNESSES

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Fig 4



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WINDOW.

SPECIFICATION forming part of Letters Patent No. 583,595, dated June 1, 1897.

Application filed January 19, 1897. Serial No. 619,750. (No model.)

To all whom it may concern:

Be it known that I, HERMAN C. FUHLMANN, a citizen of the United States, residing at Eliza, in the county of Mercer and State of Illinois, have invented certain new and useful Improvements in Windows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in windows, and has more particular relation to window-sashes.

The invention consists of certain novel constructions, combinations, and arrangements of parts, all of which will be hereinafter more particularly set forth and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 represents a perspective view of a sash embodying my invention, one of the locking-frames and the window-panes being removed. Fig. 2 represents a side elevation of the said sash, taken from the opposite side. Fig. 3 represents a vertical section through said sash on the line *xx*, Fig. 2. Fig. 4 represents an enlarged detail perspective view of one of the detachable frames.

A in the drawings represents the sash proper, B B the window-panes, and C C the movable frames. Said sash A may be made to receive either one or a plurality of panes of glass, and in the present instance is illustrated as being provided with four panes. The said sash is provided with a plurality of glass-supporting flanges *a* and vertical slots *a'*, the latter being located at the tops and bottoms of the respective apertures for receiving the glasses. The upper and lower slots *a'* are intersected by pin-passages *a''*, extending from the interior of the sash to said slots. Each of the frames C comprises side bars *c c*, a lower end bar *c'*, connecting the same, and an upper bar *c''*, the reduced ends *c'''* of the latter being movably mounted in vertical slots *c''''*, forming the upper ends of the side pieces *c c*. The lower end piece *c'* is provided with an angular plate *c''''*, secured thereto, so that one of its flanges projects in line with the said frame to enter its respective slot *a'*. The sliding pieces *c''* are pro-

vided with similar angular attachments *c''''*, the flanged portions of the same being adapted to enter the upper and lower slots *a'* as the said pieces *c''* are slid forward in the side pieces *c*. Each of the flanges *c''* is provided with an aperture *c'''*. After the glasses have been applied in their respective recesses the frames C are laid over the same, the flanges *c'* having been first introduced into their respective slots. The end pieces *c''* are then moved forward to cause the flanges *c''* to enter their respective slots and thus lock the frames firmly in position in the sash. The said end pieces *c''* are held in this position by suitable pins *c'''*, introduced into the passages *a''* from the interior of the sash and adapted to enter the aperture *c'''* of the flanges *c''*.

It will be observed from the foregoing description that as long as the pins *c'''* remain in this position of engagement with the aperture *c'''* the end pieces *c''* cannot be moved downward and the frame C removed, but should it at any time be desired to remove any one of the frames C to insert a new glass it is simply necessary to remove the pin *c'''* locking said frame in position and slide the end bars *c''* rearward in the slots *c''''*, which action will disengage the flange *c''* from its groove and permit the frame C to be removed from the sash.

It will be observed that by the employment of my invention the use of putty is altogether obviated, and the panes of glass are mounted in the sash in a firm and rigid manner by simply inserting the frames C into position and locking them by the pins *c'''*. The said pins *c'''* are preferably provided with heads whereby they may be removed, said heads being countersunk in suitable recesses formed upon the interior of the sash. Should one of the panes mounted in my improved sash become broken, it is not necessary that the services of a skilled glazier be employed, as any child could remove the frame of the broken pane and insert a new pane.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a sash provided with glass-supporting flanges and vertical

slots, of a frame comprising rigid side and top rails and a sliding bottom rail, and flanges mounted on the respective top and bottom rails and adapted to enter the respective slots in the sash to lock the frame in position.

2. The combination with a sash provided with glass-supporting flanges and vertical slots, of a frame comprising rigid side and top rails and a sliding bottom rail, flanges mounted on the top and bottom rails and adapted to enter the slots of the sash, and means for holding the flanges connected to the sliding rail in the sash or releasing it therefrom at will.

3. The combination with a sash having glass-supporting flanges, vertical slots, and a pin-passage in the said slots, of a frame

adapted to be applied over the glass resting on said flanges and having slots formed in its side bars, and a slide mounted in said slots and provided with an apertured flange adapted to enter the slot intersecting the pin-passage, a pin adapted to be passed through said pin-passage and enter the aperture of the said flange, and another flange mounted upon the lower portion of the frame and adapted to enter the remaining slot of the sash, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

HERMAN C. FUHLMANN.

Witnesses:

ISAIAH BISHOP,
LEWIS GORDON.