

979,741.

Patented Dec. 27, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

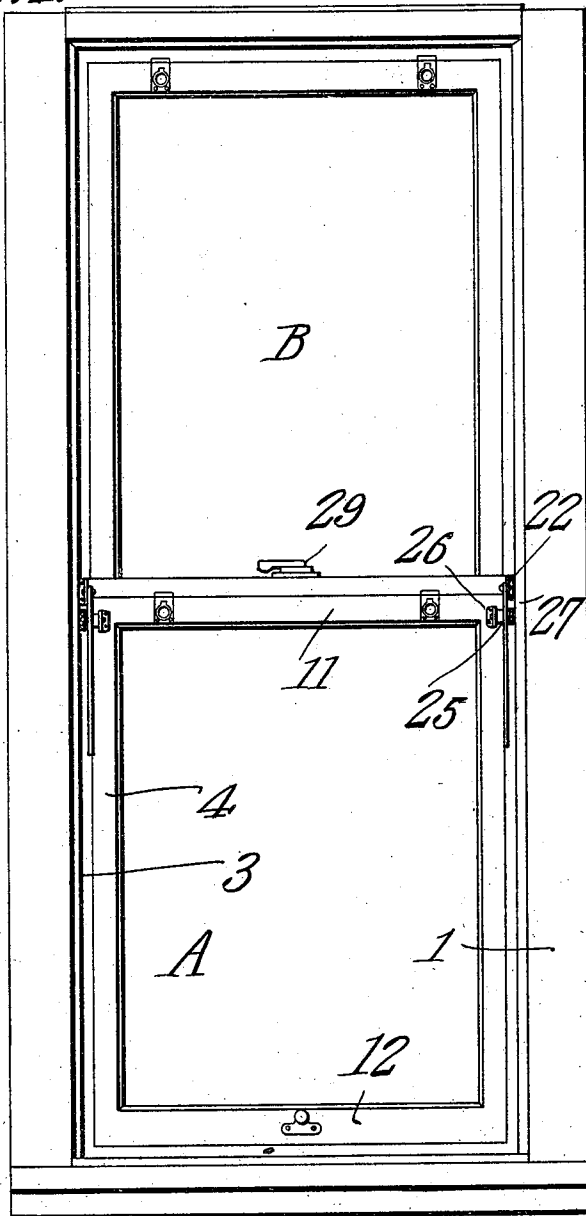
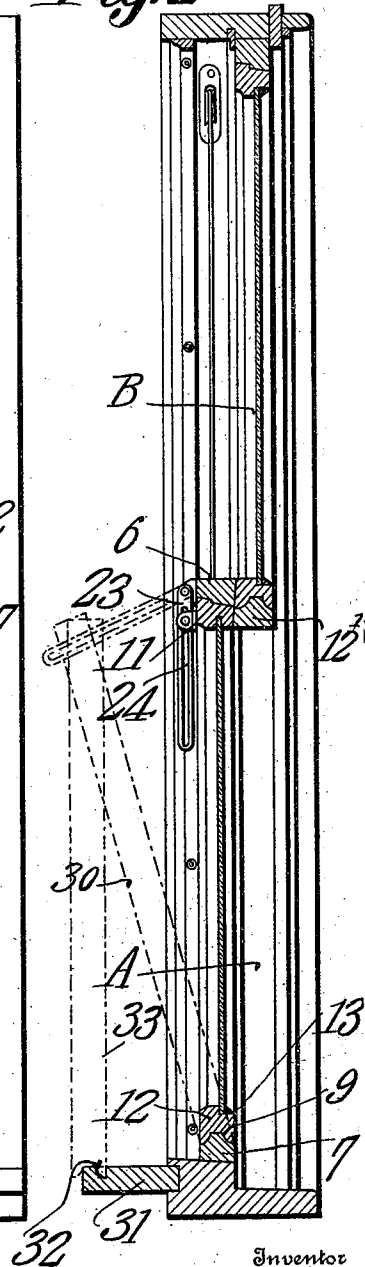


Fig. 2.



Witnesses

E. J. Stuart
Herbert D. Lawson

Inventor

Paul W. Bowde.

By

C. A. Snow & Co.
Attorneys

P. W. BOWDE.
WINDOW SASH.
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2 SHEETS—SHEET 2.

Fig. 3.

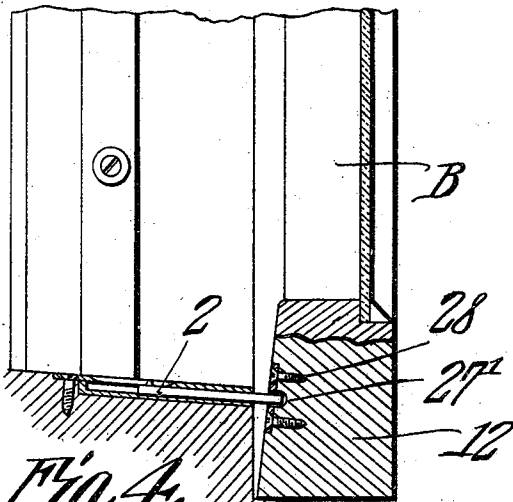
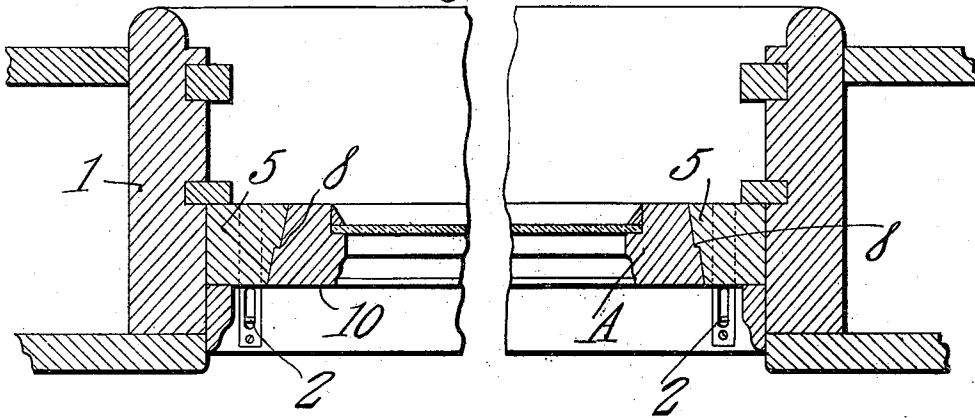


Fig. 4.

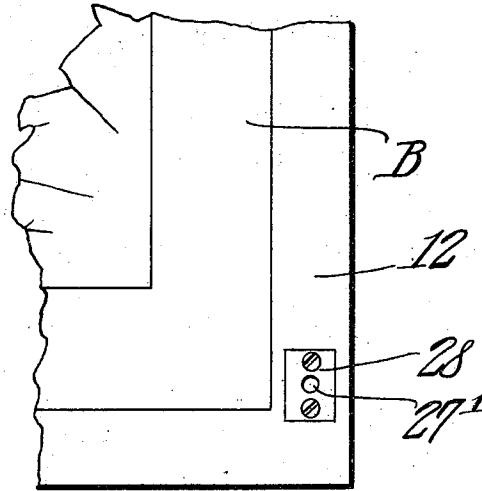


Fig. 5.

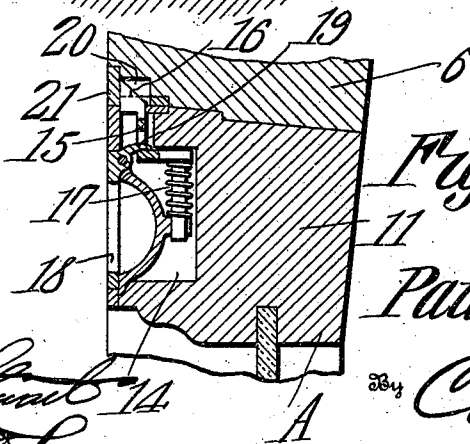


Fig. 6.

Witnesses

E. J. Lamb
Herbert Lawson

Inventor
Paul W. Bowde.
By *Cash & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

PAUL W. BOWDE, OF WAUKESHA, WISCONSIN.

WINDOW-SASH.

979,741.

Specification of Letters Patent.

Patented Dec. 27, 1910.

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To all whom it may concern:

Be it known that I, PAUL W. BOWDE, a citizen of the United States, residing at Waukesha, in the county of Waukesha and State of Wisconsin, have invented a new and useful Window-Sash, of which the following is a specification.

This invention relates to window sashes and the like and one of its objects is to provide a sash made up of an outer sliding frame and an inner or glass-carrying frame, said inner frame being so mounted as to fit snugly within the other frame.

Another object is to provide means whereby the inner frame can be supported wholly outside of the sliding outer frame and parallel therewith so as to permit access to be conveniently had to the outer surface of the glass-carrying frame for the purpose of cleaning it.

Another object is to provide means whereby the inner frame of the upper sash may be removed without allowing that sash to rush upward under the influence of its weights.

With these and other objects in view, the invention consists of certain novel details of construction and the combinations of parts hereinafter more fully described and pointed out in the claim.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a front elevation of a window casing having upper and lower sashes therein constructed in accordance with the present invention. Fig. 2 is a vertical section through the parts shown in Fig. 1, two of the positions of the lower glass-carrying frame being indicated by dotted lines. Fig. 3 is a horizontal section through the lower sash and through the adjoining portions of the casing. Fig. 4 is a vertical section through a portion of the lower end of the casing and showing the upper sash locked in lowered position. Fig. 5 is a front elevation of a portion of the top sash. Fig. 6 is an enlarged section through one of the catches used upon the sash.

Referring to the figures by characters of reference, 1 designates a window casing having sash grooves of the usual or any preferred construction and this casing has sliding bolts 2 mounted within the sill thereof and directly below the path of the lower window sash. These bolts are so located as to engage the lower rail of the upper sash

when the same is pushed downward, as hereinafter set forth.

The lower sash A consists of a main or outer frame 3 and a radially inner or glass-carrying frame 4. The outer frame is made up of side rails 5 and the top and bottom rails 6 and 7 respectively. The inner faces of the side rails converge outwardly, as clearly indicated in Fig. 3 and are stepped along intermediate lines to form longitudinal shoulders 8. The lower face of the top rail is correspondingly shaped. The upper face of the bottom rail 7 however has a rib 9 formed by cutting away the longitudinal edges of the rail, as shown especially in Fig. 2.

The inner frame 4 of sash A is formed of side rails 10 and the top and bottom rails 11 and 12 respectively, said side rails being so shaped as to fit snugly between the side rails 5 and against the shoulders 8. The bottom rail 12 has a longitudinal channel 13 in the lower face thereof and designed to receive the rib 9, the lower face of the rail 12 being so shaped as to fit snugly upon the rail 7 and with its inner and outer faces flush with the corresponding faces of said rail 7.

The top rail 11 is designed to fit snugly against the lower face of the corresponding rail of the outer frame 3 and has one or more recesses 14 in the face thereof. Each of these recesses has a sliding bolt 15 mounted therein, the tip 16 of the bolt being normally projected beyond the upper face of rail 11 and being thus held by a spring 17 mounted on the bolt. A ring 18 is pivotally mounted within the recess and stands at a point where it can be conveniently reached by the operator and a finger 19 extends from the pivot portion of the ring and movably engages the bolt. It will be apparent therefore that when the ring is swung outwardly the finger 19 will move the bolt against the stress of its spring and thus retract its tip 16 into recess 14. A recess 20 is formed in the bottom face of the rail 6 where it can receive the tip 16 when the frame 4 is in closed position within the frame 3. A keeper 21 extends across the outer face of the recess 20 and serves to retain tip 16 within said recess.

Ears 22 are secured to the end portions of the top rail 6 and have supporting strips 23 pivotally connected to them, each of these strips being formed with a longitudinal slot 24. Trunnions 25 are slidably mounted

within the slots 24, each of the trunnions extending laterally from a bracket 26 secured to one end portion of the rail 11. Nuts 27 are screwed onto these trunnions and are designed to frictionally engage the strips 23 so as to hold the trunnions and the strips against relative movement.

The upper sash B is of the same construction as the sash A with the exception that the strips 23 and the parts cooperating therewith are eliminated. Recesses 27' are formed in plates 28 secured to the end portions of the lower rail 12 these recesses being so located as to receive the bolts 2 when sash B is moved to its lowermost position.

It is of course to be understood that the two sashes are counterbalanced as ordinarily, and that these can be secured in closed position by means of the usual form of sash lock, such as shown, for example, at 29 in Fig. 1.

When it is desired to ventilate a room having sashes such as herein described, the rings 18 of the locking bolts 15 are pulled outwardly from the inner frame of the lower sash so as to disengage the bolt heads 16 from the keepers 21. The inner frame 4 of the lower sash can then be swung inward at its upper end, the rib 19 constituting the fulcrum thereof. The inward swinging movement of the inner frame 4 is limited by the trunnions 25 coming into contact with the ends of the slots 24. After they have reached this position the parts may be tightened together by means of the nuts 27. This position of the frame 4 has been indicated by dotted lines at 30 in Fig. 2. When the parts are thus located it will be apparent that air is free to circulate over the frame without creating a direct draft upon a person sitting near the window.

If desired, after the frame 4 has been brought to the position indicated at 30, the lower rail 12 can be lifted off of the rib 9 and its channel 13 engaged over an up-standing rib 32 which is formed across the window ledge 31 at a point as far from the sash grooves as the inner ends of the slots

24 are from the pivots through ears 22. At this time the frames 4 will thus assume a position entirely outside of but substantially parallel with the frame 3 as indicated by dotted lines at 33 in Fig. 2. When the frame 4 is thus located the outer face of the glass carried thereby can be conveniently reached for the purpose of washing it.

Should it be desired to clean the outer surface of the glass carried by the upper sash B, it would be merely necessary to lower the upper sash B until the bolts 12 could be slid into engagement therewith. By then unfastening the upper rails of the inner and outer frames of the upper sash, said inner frame could be lifted off of the rib on rail 12' and thus entirely removed from the outer frame. By locking the upper sash in its lower position, it becomes then impossible for the counterbalances to elevate the outer frame after it has been relieved of the weight of its frame.

It is to be understood that various changes may be made in the construction and arrangement of the parts without departing from the spirit or sacrificing the advantages of the invention.

What is claimed is:—

A sash comprising an outer frame having a rib along its bottom rail, an inner glazed frame having its bottom rail channeled to fit said rib, slotted strips pivoted to the top rail of the outer frame, and trunnions engaging their slots and carried by the top rail of the inner frame; combined with a casing having sash grooves, a window ledge, and a rib on the latter spaced from the grooves a distance substantially equal to that between said pivot and the end of said slot, for the purpose set forth.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

PAUL W. BOWDE.

Witnesses:

F. G. COWIE,
C. E. DOYLE.