

(No Model.)

A. J. WALKER & J. E. ALBERT.
WINDOW SASH AND SASH FRAME.

No. 539,206.

Patented May 14, 1895.

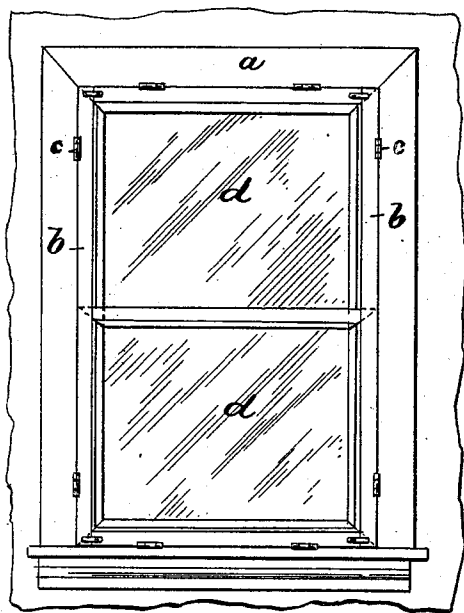


Fig. 1.

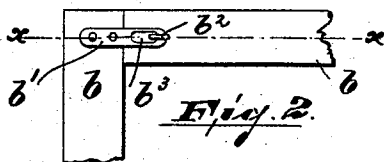


Fig. 2.

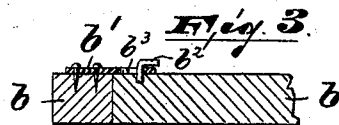


Fig. 3.

Fig. 5.

Fig. 6.

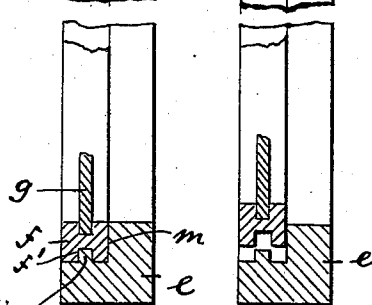
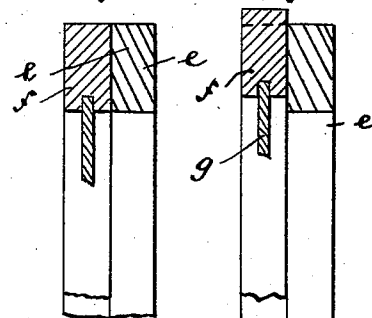


Fig. 4.

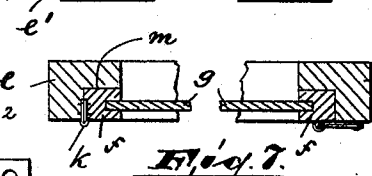


Fig. 7.

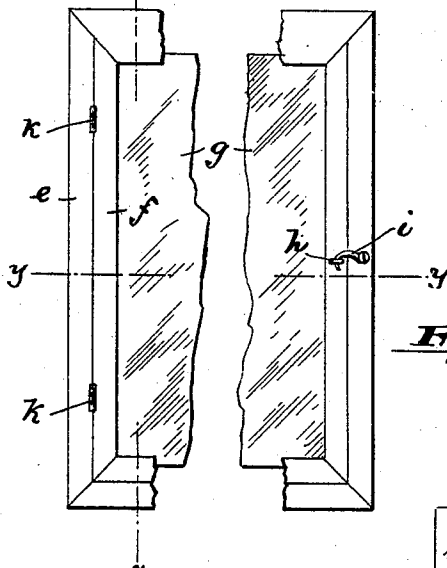


Fig. 8.

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UNITED STATES PATENT OFFICE.

ARTHUR JOHN WALKER AND JOHN E. ALBERT, OF NEWARK, NEW JERSEY.

WINDOW-SASH AND SASH-FRAME.

SPECIFICATION forming part of Letters Patent No. 539,206, dated May 14, 1895.

Application filed October 29, 1894. Serial No. 527,170. (No model.)

To all whom it may concern:

Be it known that we, ARTHUR JOHN WALKER, a subject of the Queen of Great Britain, and JOHN E. ALBERT, a citizen of the United States, residing in the city of Newark, Essex county, State of New Jersey, have invented certain new and useful Improvements in Window-Sashes and Sash-Frames; and we 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a window sash, of such construction that the portion containing the glass is hinged to the sash frame proper, and thus the cleaning of the window or its repairing is greatly facilitated.

The invention consists in the improved window sash and in the combination and arrangement of the various parts thereof substantially as will be hereinafter more fully described and finally embodied in the clauses of the claim.

Referring to the accompanying drawings, Figure 1 is a front elevation of a portion of a window-frame containing our improved window-sash. Figs. 2 and 3 are detail views of a certain locking device used in connection with the beading of the window-frame. Fig. 4 is an enlarged front elevation of one of the window-sashes. Fig. 5 is an enlarged sectional view on the line *z z* of Fig. 4; Fig. 6, a view similar to Fig. 5, the inner frame being shown in a raised position, ready for being opened; Fig. 7, an enlarged sectional view on the line *y y* of Fig. 4, and Fig. 8 is an enlarged front view of one of the hinges used for securing the inner sash-frame to the outer sash-frame.

In said drawings *a* represents the window frame and *b* the beading, which latter consists of four sections, each of which being hinged to the window frame as at *c*. By swinging said sections inward on their respective hinges, the sashes *d* can easily be withdrawn for the purpose of cleaning, repairing, &c. To firmly secure the beading in

its normal position its adjoining sections (see Figs. 2 and 3) are provided with a plate *b'* having slot *b³* and with a hook *b²* respectively, said hook adapted to be engaged by the slotted plate *b'*.

The window sash *d* consists of the outer frame *e* and of the inner frame *f* to which latter the glass *g* is secured. Said inner frame is hinged at one side as at *h* to the outer frame, while its opposite side is provided with an eye *h* adapted to be engaged by a hook *i* pivotally secured to the said outer frame.

To make a substantial air and water tight joint, the side portions and the lower portion of the outer frame are rabbeted as at *m*, in which rabbet the inner frame rests. The lower inner portion of the outer frame *e* is also provided with a tongue *e'* adapted to be engaged by a corresponding groove *f'* in the lower section of the inner frame. The upper section of the outer frame *e* does not project over and above the upper section of the inner frame as clearly shown in Figs. 5 and 6, to allow the said inner frame to be raised out of its engagement with the outer frame (*f'* engaging *e'*) before being swung open. For that purpose the hinge *h* consists of the two sections *n* and *n'* provided with butts *n²*, *n³* and *n⁴* respectively arranged around the bolt or pin *n⁶*. The butts *n²* and *n⁴* are cut off in such a manner as to leave a space *n⁵* between them, to allow the section *n'* to be raised with the inner frame *f* when the latter is to be opened.

The eye *h* and hook *i* can be substituted by any other locking mechanism.

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

In a window sash, the combination with the outer frame rabbeted at its sides and bottom sections, of an inner frame arranged in said outer frame and provided at the under side of its bottom section with a longitudinally arranged groove, a tongue arranged longitudinally on the lower inner portion of the outer frame and adapted to be engaged by said groove, and hinges connecting the inner frame with the outer frame, each hinge consisting of two sections provided with butts so ar-

ranged around a pin that the section secured
to the inner frame may be raised and lowered
with the latter a distance sufficient to clear
the tongue on the lower section of the outer
5 frame, all said parts, substantially as and for
the purposes described.

In testimony that we claim the foregoing we

have hereunto set our hands this 24th day of
October, 1894.

ARTHUR JOHN WALKER.
JOHN E. ALBERT.

Witnesses:

ALFRED GARTNER,
ARTHUR H. THOMSON.