(No Model.) 2 Sheets—Sheet 1.

G. GIGLIO.

WINDOW.

No. 521,585. Patented June 19, 1894.

Fig. 1.

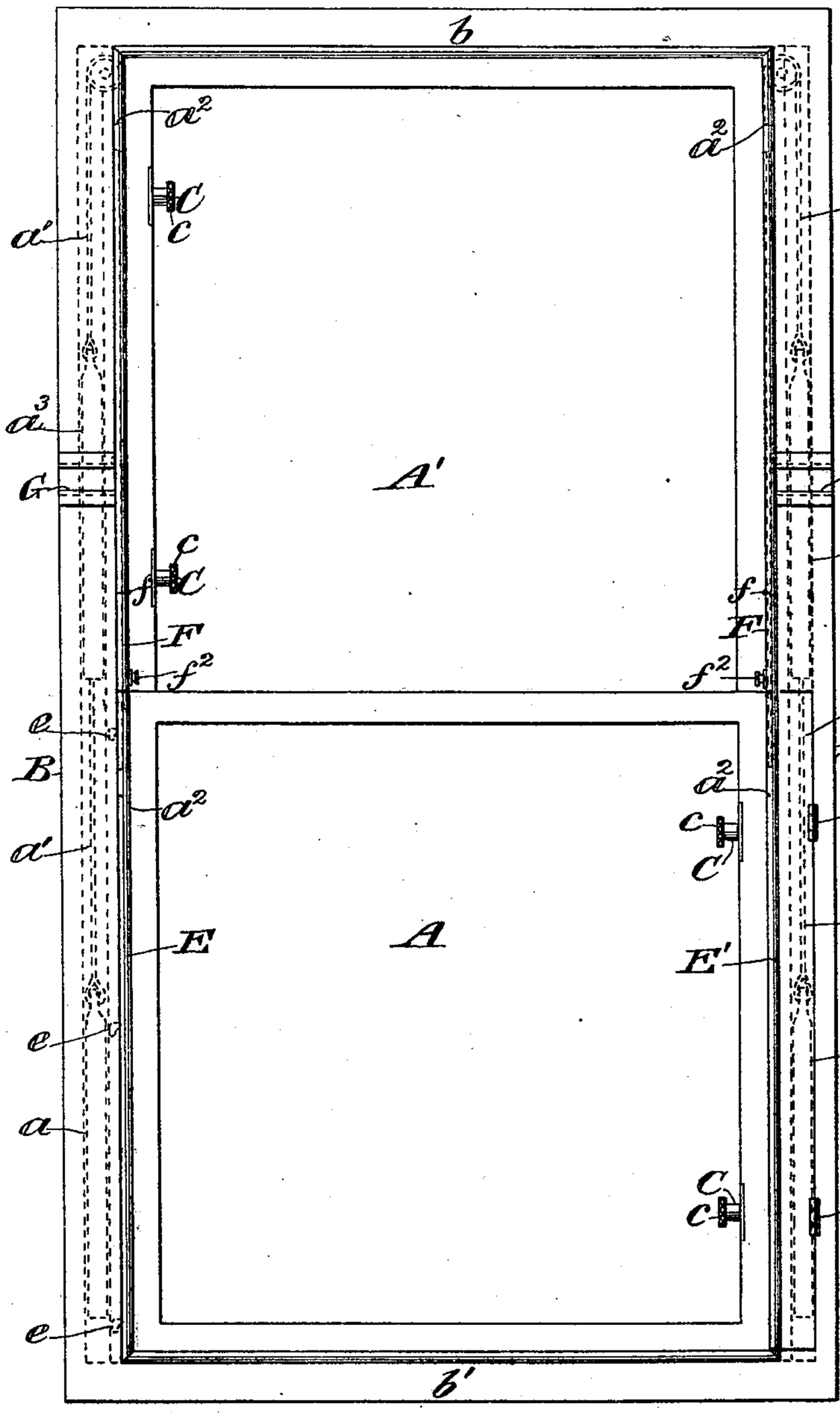


Fig. 2.

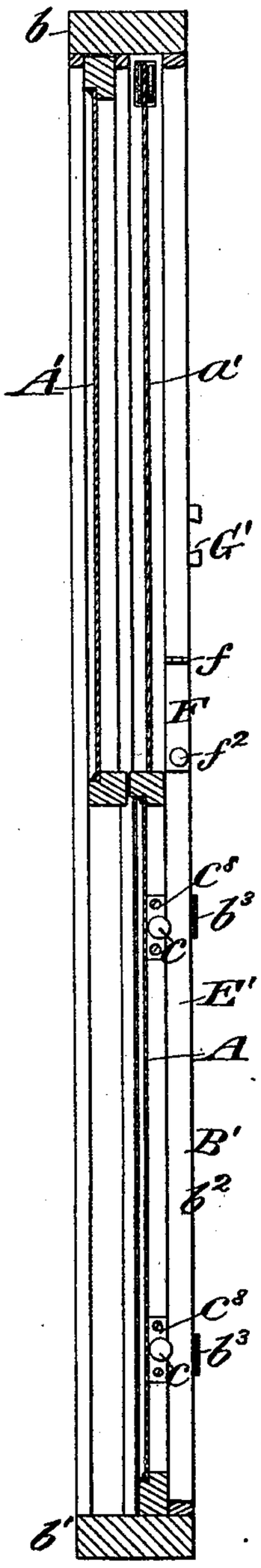
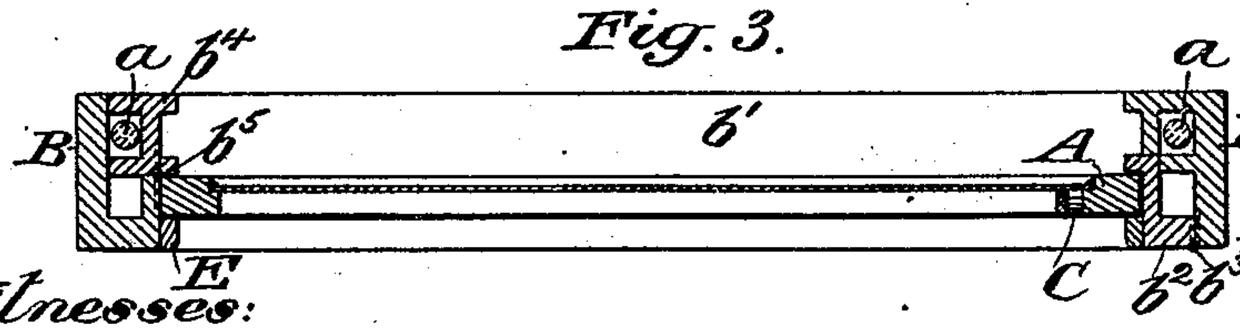


Fig. 3.



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THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

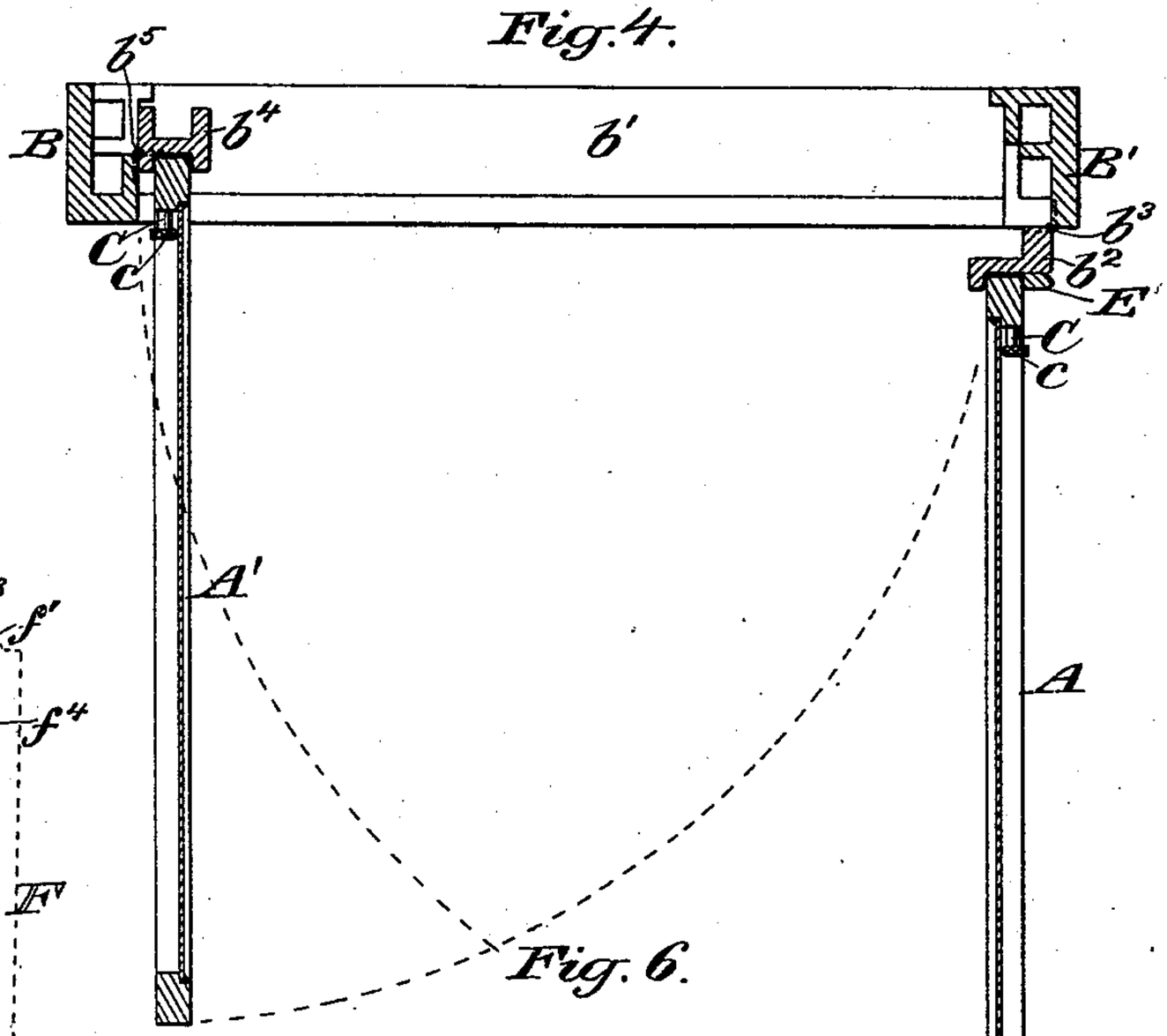
(No Model.) 2 Sheets—Sheet 2.

G. GIGLIO.

WINDOW.

No. 521,585. Patented June 19, 1894.

Fig. 4.



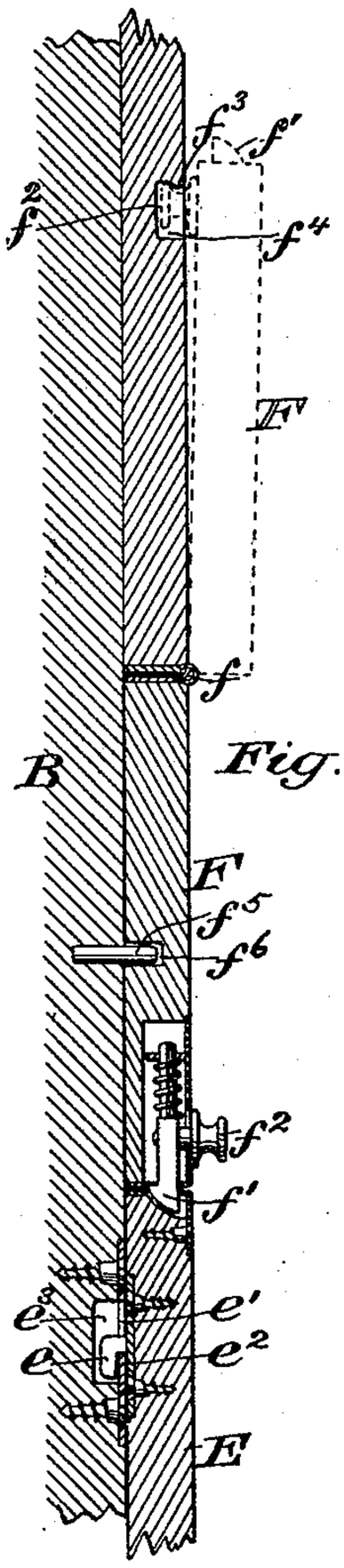


Fig. 5.

Fig. 6.

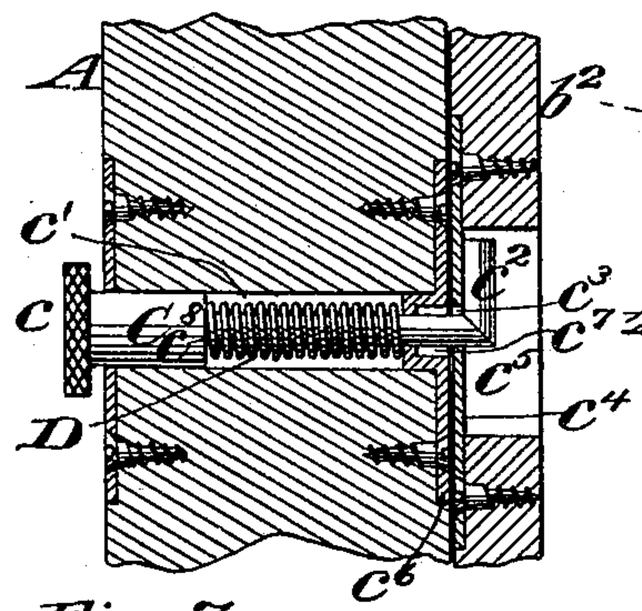


Fig. 7.

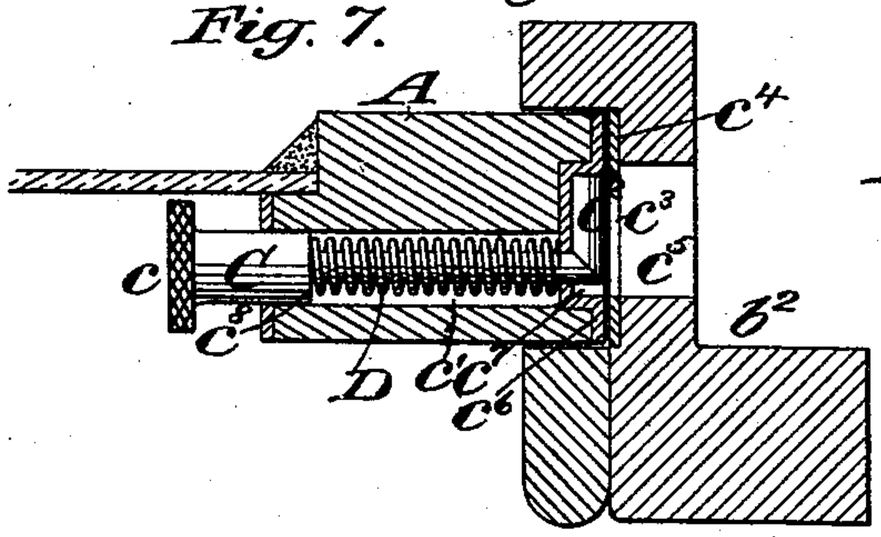


Fig. 9.

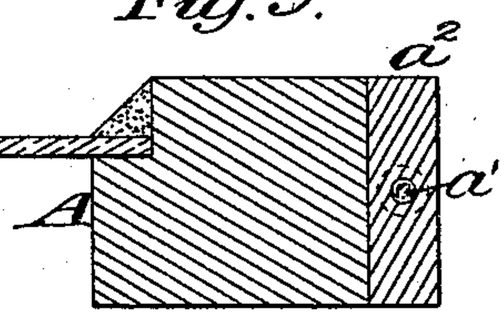
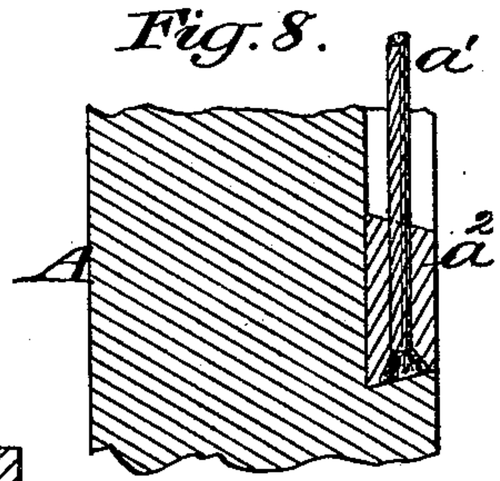


Fig. 8.



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WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GIOVANNI GIGLIO, OF NEW YORK, N. Y.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 521,585, dated June 19, 1894.

Application filed December 12, 1893. Serial No. 493,463. (No model.)

To all whom it may concern:

Be it known that I, GIOVANNI GIGLIO, of New York, in the county and State of New York, have invented a new and useful Improvement in Windows, of which the following is a specification.

My invention relates to an improvement in windows in which provision is made for swinging both the upper and lower sashes on hinged supports into position to render them easily accessible upon both sides for the purpose of cleaning the glass and also for purposes of ventilation, while at the same time they are arranged to slide up and down in the ordinary manner.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a view of a window, looking at it on the side from which the sashes are arranged to swing toward the observer. Fig. 2 is a vertical transverse section from front to rear. Fig. 3 is a horizontal transverse section through the lower sash. Fig. 4 is a horizontal section through the lower sash, showing the position of the upper and lower sashes when the upper sash has been lowered into position opposite the normal position of the lower sash, and both sashes swung inwardly. Fig. 5 is a partial vertical section upon an enlarged scale through one of the side stops and window frame adjacent thereto, showing the arrangement for removing the stop to permit the sashes to swing. Fig. 6 is a partial vertical section on an enlarged scale through one side of a window sash and a portion of the window frame adjacent thereto at a point where the window sash is locked to and released from the window frame. Fig. 7 is a horizontal section of the same, showing the sash released from the frame as distinguished from it being connected therewith, shown in Fig. 6. Fig. 8 is a partial vertical section on an enlarged scale through the side of the sash at the point where the weight cord is removably attached to the sash, and Fig. 9 is a horizontal section of the same.

The lower window sash is denoted by A and the upper window sash by A′.

The sides of the window frame are denoted respectively by B and B′, the top by b and the bottom by b'.

A portion of the window frame toward the front and opposite the lower sash—in the present instance the portion at the right hand side of the lower sash, denoted by b^2—is hinged as shown at b^3 to the stationary portion of the window frame B′. Another portion of the window frame at the left hand side and to the rear of the lower sash, denoted by b^4 is hinged to the stationary portion B of the window frame, as at b^5.

The under sash A is fitted to slide up and down between the side frames B, B′, as is usual, and is provided with counterbalancing weights a, the cords of which pass over pulleys at the top of the frame and thence down to the sides of the sash to which they are secured, in a removable manner, as follows:—The cords are denoted by a' (see Fig. 8) and have their ends anchored within dovetailed pieces a^2 fitted to slide laterally of the side of the sash into and out of a dovetailed recess provided therefor in the side of the sash. The purpose of the removable feature of the dovetailed pieces a^2 will hereinafter appear. The upper sash is also provided in the usual manner with counterbalance weights a^3, the cords of which are anchored in dovetailed pieces in the sides of the upper sash in a manner quite similar to that already described with respect to the lower sash. The upper sash is fitted to slide down and up between the side frames B and B′ as is usual.

The sash A is constructed to be locked to the swinging frame section b^2 whenever it is desired to swing it out from between the side frames and to be released from the section b^2 whenever it is desired to slide it up and down between the frames. In like manner the upper sash A′ is constructed to be locked to and released from the swinging frame section b^4.

I provide two locking and releasing devices for the lower sash and two for the upper sash. These are quite similar in their construction and arrangement and a specific description of one will suffice for all. I have shown them on an enlarged scale in Figs. 6 and 7. They are constructed and arranged as follows:—A rotary spindle C provided on its exposed end

with an operating piece c, shown in the present instance as a disk with a milled edge, is seated within a perforation c' in the side of the sash, its inner end being provided with a laterally turned nose c^2 adapted—when the spindle C is turned in one direction—to pass through an elongated slot c^3 in a face plate c^4 secured to the inner face of the frame section b^2 or b^4 and into a recess c^5 formed in the frame b^2 or b^4 of sufficient size to permit the nose c^2 to be turned laterally across the slot c^3. On the outer face of the side of the sash A at a point opposite the plate c^4 there is fixed a plate c^6 provided with a pocket c^7 for the reception of the nose c^2 of the catch, when the latter is released from the frame. A spring D, bearing at one end against the plate c^6 and at the opposite end against a shoulder c^8 on the stem C, tends to hold the catch in position with the nose c^2 in the pocket c^7 when the catch is released from the frame.

To permit the sashes A and A′ to be swung laterally out of their normal positions, I make the stop E at one side of the sash A—at the side opposite the hinged frame section—removable. This I accomplish by providing the face of the stop E adjacent to the frame with inwardly and downwardly extended hooks e, in the present instance three such hooks are shown, which are adapted to enter slots e' in plates e^2 fixed to the frame adjacent to the stop, as clearly indicated in Fig. 5, and drop downwardly within recesses e^3 formed in the face of the frame, thereby causing the hooks e to hook over the plates e^2 at the bottom edges of the slots e'.

In order to permit the weight cords of the upper and lower sashes to pass inwardly out of their normal positions, as the window sashes are swung inwardly on their hinged supports, I hinge the lower portions F of the stops, opposite the upper sash, to the stationary upper portions of said stops, as shown at f so that they may be swung up out of the way into the position shown in dotted lines in Fig. 5. I provide the lower ends of said sections F with spring actuated catches f' adapted to interlock with the ends of the removable stop E and its opposite stop section E′, and the catch operating handle f^2 which projects inwardly from the stop is made to spring past a projection f^3 in a recess f^4 in the stationary portion of the stop to hold the section F temporarily in its open position. I also prefer to insert guide pins f^5 in the frame in position to enter sockets f^6 in the faces of the sections F when the latter are swung down into their closed positions in order to lock both the sections F and the sections E against displacement in a direction lateral with respect to the plane of the window. I provide the said frames B and B′ with recesses G and G′ for receiving the dovetailed pieces a^2 to which the weight cords are anchored, when the cords are detached from the window sashes so that they may be held in position within easy reach of the operator whenever it is desired to again connect them with the sashes.

In operation, when it is desired to swing the lower sash away from the frame, it may be first placed in such a position as to swing freely over the sill and with its catches opposite the slots in the hinged section b^2 of the frame. The catches may then be pushed through the plates c^4 and turned to lock the sash to the swinging frame section, the stop sections F may be then swung up into the positions shown in dotted lines in Fig. 5 and the stop E removed. The sash A may be then swung on its hinged support outwardly or toward the operator until access to the dovetailed piece a^2 can be obtained. This preliminary swinging movement of the sash A will be permitted by the weight cord passing through the opening left by the stop section F. The dovetail piece a^2 may be then removed from the sash and placed in the recess G. The sash A may be then swung into the position shown in Fig. 4. The upper sash A′ may then be lowered into the position opposite the normal position of the sash A, its left hand side locked to the swinging frame section b^4 in the same manner as the sash A was locked to its hinged frame section, the weight cord at the free swinging end of the sash A′ may be disengaged and placed in the recess G′ and the sash A′ may be then swung into the position shown in Fig. 4.

It is obvious that when swung into the positions shown in Fig. 4, ready access may be obtained to the opposite sides of the two sashes for purposes of cleaning, painting, &c., and also that the entire window opening may be utilized for purposes of ventilation.

What I claim is—

1. The combination with the frame and an upper and lower sash free to slide up and down within the frame, of hinged frame sections at the opposite sides of the frame and means for locking the window sashes to and releasing them from the hinged sections of the frame, one sash to and from one hinged section and the other sash to and from the other hinged section, substantially as set forth.

2. The combination with the window frame, an upper and a lower sash free to slide up and down within the frame, hinged frame sections located respectively at the outside and inside corners of the opposite sides of the frame, and means for locking the sashes to the hinged sections to swing in a direction lateral with respect to the plane of the window, of a removable stop constructed to interlock with the frame at the free swinging edge of the sash, substantially as set forth.

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