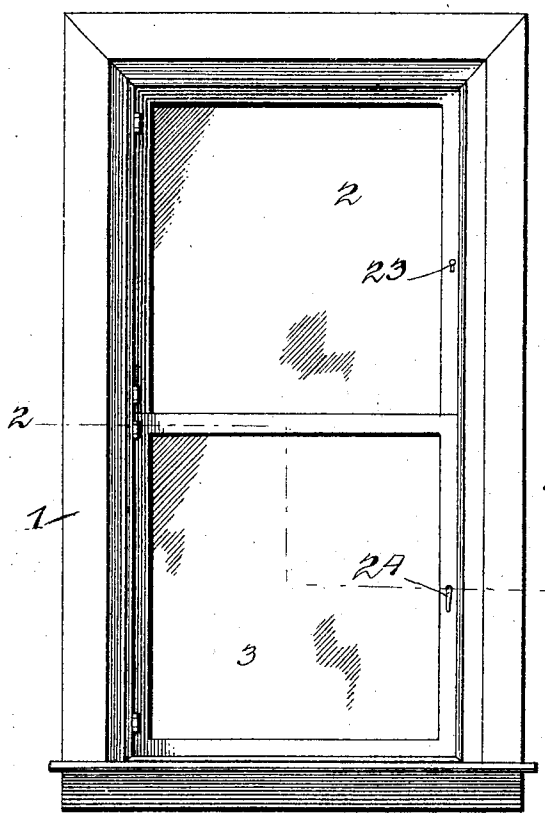
No. 813,455. PATENTED FEB. 27, 1906.

R. O. SCHEEL.

WINDOW.

APPLICATION FILED NOV. 21, 1904.

Fig. 1.



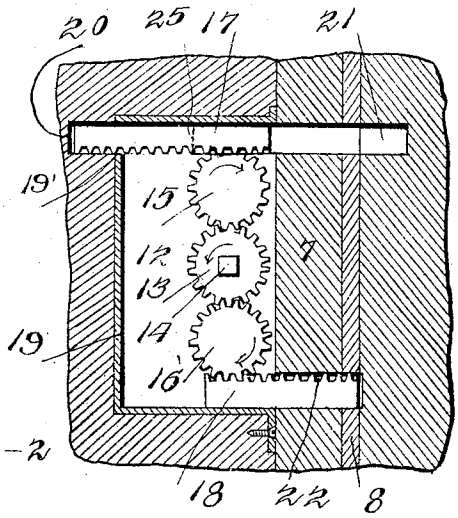


Fig. 3.

Fig. 2.

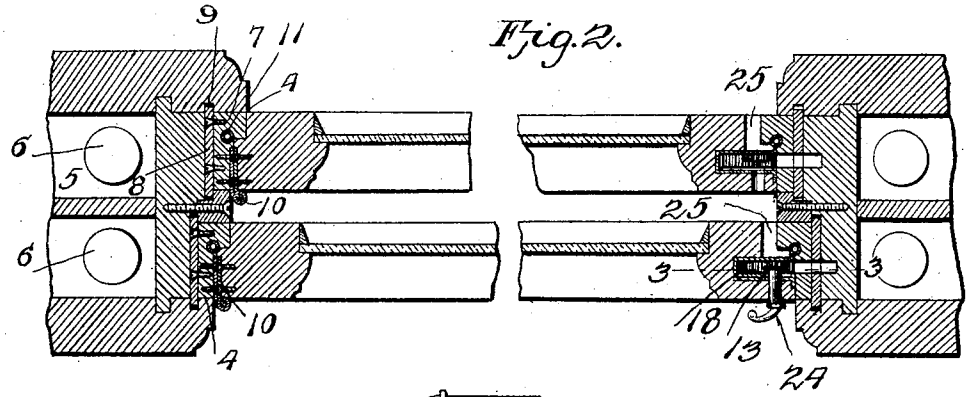
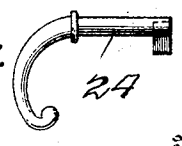


Fig. 4.



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WINDOW.

No. 813,455. Specification of Letters Patent. Patented Feb. 27, 1906.

Application filed November 21, 1904. Serial No. 233,735.

To all whom it may concern:

Be it known that I, RICHARD O. SCHEEL, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Windows, of which the following is a specification.

This invention relates to windows, and has for its objects to produce a comparatively simple inexpensive device of this character in which the sashes are adapted for vertical travel, as usual, within the sash-frame, one wherein the sashes may be readily swung in a horizontal plane to open position, thus permitting free ventilation and ready cleaning of the windows, and one wherein the sash-supporting members or carriers will be locked against movement in the casing simultaneously with the unlocking of the sashes to permit opening of the latter.

With these and other objects in view the invention comprises the novel features of construction and combination of parts, more fully hereinafter described.

In the accompanying drawings, Figure 1 is an elevation of a window and its casing embodying the invention. Fig. 2 is a horizontal section taken on the line 2 2 of Fig. 1 with the upper sash lowered. Fig. 3 is a vertical sectional elevation, on an enlarged scale, the section being taken on the line 3 3 of Fig. 2. Fig. 4 is a detail view of the lock-operating key.

Referring to the drawings, 1 designates a window-casing adapted to receive an upper section or sash 2 and a lower section or sash 3, these parts, except as hereinafter explained, being of the usual or any appropriate construction and material, the casing having vertical sash-guides 4 and weight-channels 5, in which are arranged vertically-movable weights 6.

The weights 6 are connected by suitable cords or chains (not shown) with sash-supporting members or carriers 7, arranged for vertical sliding movement within the sash-guides 4, these carriers, which are preferably in the form of hard-wood strips, having attached to their inner faces strengthening-plates 8, which project transversely beyond the carriers to produce guide-flanges 9, seated in appropriate grooves or guideways in the walls of the casing, it being thus apparent that the plates 8 subserve the threefold function of guiding the carriers in their movements, preventing their escape from the sash-guides and strengthening the strips 7 to prevent warping of the latter.

The sashes or sections 2 and 3 are pivotally connected at one side of the casing to their respective carriers 7, preferably by means of leaf-hinges 10, thus adapting them not only for vertical movement with the carriers in the casing, but also for movement in a horizontal plane to open or closed position, in which latter position the sashes contact at their inner longitudinal edges with tubular members 11, carried by the strips 7 and composed of rubber or other suitable material for rendering the window weather-tight.

Each sash or section is provided at a point adjacent the longitudinal center of its vertical free edge with a compound or duplex lock 12, these locks being identical in construction and operation, wherefore I will describe but one in detail.

One of the improved locks is illustrated in Fig. 3, in which 13 designates a primary operating member or pinion having a square or other non-circular key-post 14, this pinion, which is adapted for rotation, being centrally disposed between and in mesh with a pair of supplemental operating members or pinions 15 16, in turn in mesh, respectively, with locking members or bars 17 18, each provided with a longitudinal series of teeth engaged by the teeth on the adjacent pinion.

The sash-frame is mortised to receive a metal casing 19, containing the locking mechanism, and this casing has at its upper end an opening 19′, registering with an extension 20 of the mortise, designed for the reception of a portion of the locking-bar 17, which is somewhat longer than the bar 18, while the window-casing is provided with a pair of mortises or sockets 21 22, designed to register, respectively, with the bars 17 18 when the window is in normal closed position, attention being directed to the fact that the mortise 21 is continued through the adjacent carrier 7 and into the window-frame, while the mortise 22 extends only into the carrier. Formed in the sash-bar and in register with the stem 14 is a keyhole 23 to permit the introduction of a key 24, such as illustrated in Fig. 4, while the said bar is further provided upon its inner face with a transverse opening 25, adapted to register with the inner end of the locking member 17 when the latter is in locking position for a purpose which will presently appear.

In practice when the window is in normal

closed position the locking-bar 17 lies at rest within the casing 19, while the bar 18 projects into the mortise 22 for maintaining the window in locked position, as illustrated in Fig. 3, the bars being, however, under these conditions in engagement with their respective operating members or pinions 15 16. With the parts in this position if it is desired to release the window to permit opening of the latter the key 24 is engaged with the stem 14 and the member or pinion 13 rotated in the direction indicated by the arrow in Fig. 3, thereby imparting a reverse rotation to the pinions 15 16 and a corresponding movement to the bars 17 18, thus retracting the bar 18 to a position wholly within the casing 19 and moving the bar 17 into the mortise 21, it being obvious that under these conditions the bar 17 serves to lock the strip 7 against vertical movement in the window-frame, while at the same time the window section or sash will be released and may be freely opened, the opening 25 serving when the window is opened to permit free passage of that portion or end of the bar 17 which projects into the casing 19.

From the foregoing it is apparent that I produce a simple inexpensive device admirably adapted for the attainment of the ends in view, it being understood that minor changes in the details herein set forth may be resorted to without departing from the spirit of the invention.

Having thus fully described the invention, what is claimed as new is—

1. The combination with a window and its casing, the latter having sash-guides, of vertically-movable carriers arranged in the sash-guides, a sash pivoted to one of the carriers for movement therewith, said sash being adapted to swing horizontally on its pivot to open position, a pair of reversely-movable locking members, and means for operating the members to simultaneously release the sash and lock the adjacent carrier against movement.

2. The combination with a window and its casing, the latter having sash-guides, of carrier-strips arranged for vertical movement in the sash-guides, a sash pivoted to one of the strips for movement therewith and to swing in a horizontal plane to open position, and a lock carried by the sash for securing the latter in closed position, said lock comprising a pair of reversely-movable locking-bars adapted for alternate engagement with the sash-frame, and means for operating the bars, one of the bars being designed for locking the sash in closed position and the other for securing the adjacent carrier-strip against movement in its guide.

3. The combination with a window and its casing, the latter having sash-guides, of carrier-strips arranged for vertical movement in the guides, a sash pivoted to one of the strips for movement therewith and to swing in a horizontal plane to open position, and a lock carried by the sash for securing the latter in closed position, said lock comprising a pair of reversely-movable rack-bars adapted for alternate engagement with the window-frame, and reversely-rotatable gears engaged respectively with the bars for operating the latter, one of the bars being designed for locking the sash in closed position and the other for securing the adjacent carrier-strip against movement in its guide.

In testimony whereof I affix my signature in presence of two witnesses.

RICHARD O. SCHEEL.

Witnesses:
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