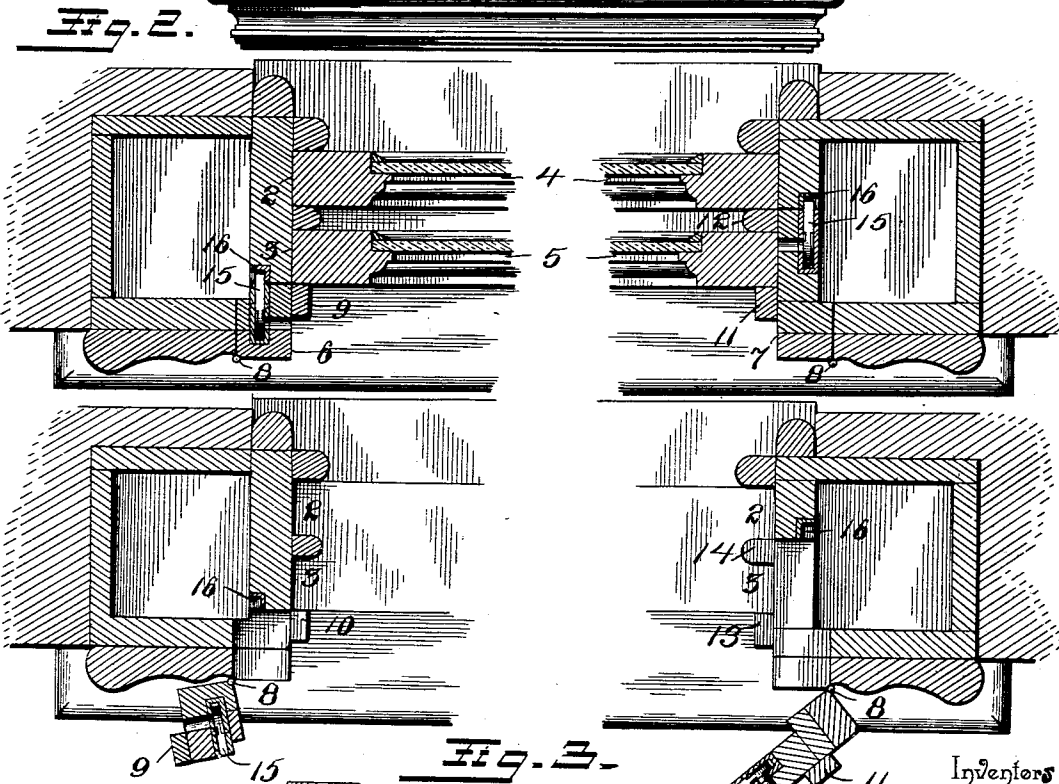
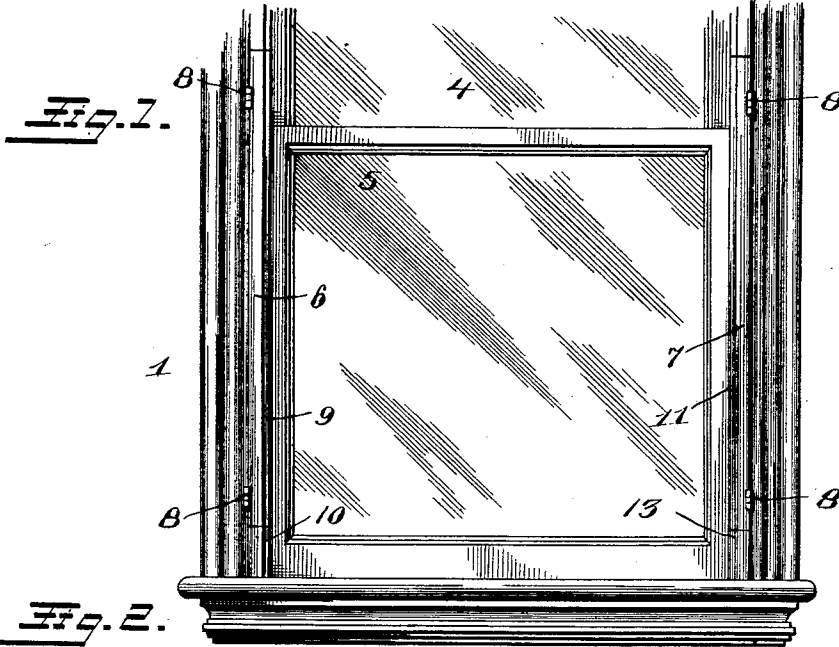


(No Model.)

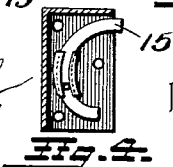
C. R. ARNOLD & A. M. LICHTENBERGER.
WINDOW FRAME.

No. 578,187.

Patented Mar. 2, 1897.



Witnesses
H. Koerth.
H. J. Riley



By their Attorneys,

Clarence R. Arnold
and
Albert M. Lichtenberger,
Attorneys.

UNITED STATES PATENT OFFICE.

CLARENCE ROCKWELL ARNOLD AND ALBERT MASON LICHTENBERGER, OF
WELLSVILLE, OHIO.

WINDOW-FRAME.

SPECIFICATION forming part of Letters Patent No. 578,187, dated March 2, 1897.

Application filed October 10, 1895. Serial No. 565,274. (No model.)

To all whom it may concern:

Be it known that we, CLARENCE ROCKWELL ARNOLD and ALBERT MASON LICHTENBERGER, citizens of the United States, residing at Wellsville, in the county of Columbiana and State of Ohio, have invented a new and useful Window-Frame, of which the following is a specification.

The invention relates to improvements in window-frames.

The object of the present invention is to improve the construction of window-frames and to enable the window-sashes to be readily removed from the frames for cleaning and the like without detaching the strips or beads which form the ways for the sashes and without injuring the paint of the frames or sashes.

A further object of the invention is to enable the sashes to be readily replaced in the frames and to prevent any material weakening of the window.

The invention consists in the construction and novel combination and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

In the drawings, Figure 1 is a front elevation of a window constructed in accordance with this invention. Fig. 2 is a horizontal sectional view, the removable sections of the window-frame being closed or in operative position. Fig. 3 is a similar view, the movable sections being open. Fig. 4 is a detail view of the latch.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a window-frame provided at opposite sides with the usual vertical ways 2 and 3, formed by strips or beads in the usual manner and receiving upper and lower sashes 4 and 5. The window-frame is provided at its inner face at opposite sides with movable sections 6 and 7 of a length slightly greater than the length of a sash and carrying portions of the outer beads of the ways 2 and 3, whereby when the sections 6 and 7 are moved out of position spaces are formed in the ways, intermediate of the ends thereof, to enable the sashes, when brought opposite the spaces, to be drawn through them and thereby re-

moved from the window-frame without disconnecting the sash-cords. The movable sections may be mounted in any suitable manner, but are preferably connected with the bead portion of the window by hinges 8. The section 6 carries a portion 9 of the bead 10, and when it is swung open the lower sash is adapted to be slightly raised to bring it opposite the space formed by the opening of the section 6, after which the sash may be readily removed from the window-frame. When the lower sash has been cleaned, it may be moved upward to the top of the window-frame without inserting it in its ways, and the other section 7, which carries portions 11 and 12 of beads 13 and 14, may be swung open, and the upper sash can be removed by sliding it downward to a position opposite the space afforded by the opening of the section 7.

In replacing the sash the upper one is first introduced in its ways, and the section 7 is then closed, after which the lower sash is replaced and the other section 6 is closed.

The sections 6 and 7 are located intermediate of the ends of the ways of the window-frame in order to provide rigid stationary portions of the beads which form the ways at the top and bottom of the window-frame to avoid material weakening of the window and to enable the sash, when closed, to withstand any attempt to force them from the exterior, which they could not withstand were the window-frame not provided with a removable section.

Each section is provided with a curved latch-bar 15, set into the section and arranged to engage a suitable socket or keeper 16 of the stationary portion of the frame. The bolt is provided with an arm or finger piece, which is located below the adjacent outer surface of the sections, and the one located on section 7 will not interfere with the sliding of the lower sash.

It will be seen that the window-frame is exceedingly simple and inexpensive in construction, that it enables the sashes to be readily removed for cleaning and the like without injuring the frame or the sashes and without marring the paint, and that the window-frame is not materially weakened.

Changes in the form, proportion, and minor

details of construction may be resorted to without departing from the principle or sacrificing any advantages of the invention.

What we claim is—

- 5 The combination of a window-frame provided with inner and outer sashways, movable sections 6 and 7 hinged to the window-frame and fitting in recesses or cut-away portions thereof and completing the same, the
15 sections 6 carrying the portion 9 of the bead 10 and adapted to provide an entrance to the ways of the inner or lower sash to permit the same to be removed from and replaced in the window-frame, and the other section carrying the parallel portions 11 and 12 of the beads
15 13 and 14 of the inner and outer sashways and providing, when swung open, an entrance

to both of said ways to permit the outer or upper sash to be removed, and curved bolts mounted on the hinged sections at the inner edges thereof and concealed within the same and disposed transversely of the window-frame in position for engaging the adjacent portion thereof when the sections are closed, substantially as described. 20 25

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

CLARENCE ROCKWELL ARNOLD.
ALBERT MASON LICHTENBERGER.

Witnesses:

NELLIE J. WELLS,
FRANK L. WELLS.