J. F. ZIMMERMANN.

Sash-Fastener.

No. 205,166. Patented June 18, 1878.

Fig. 1.

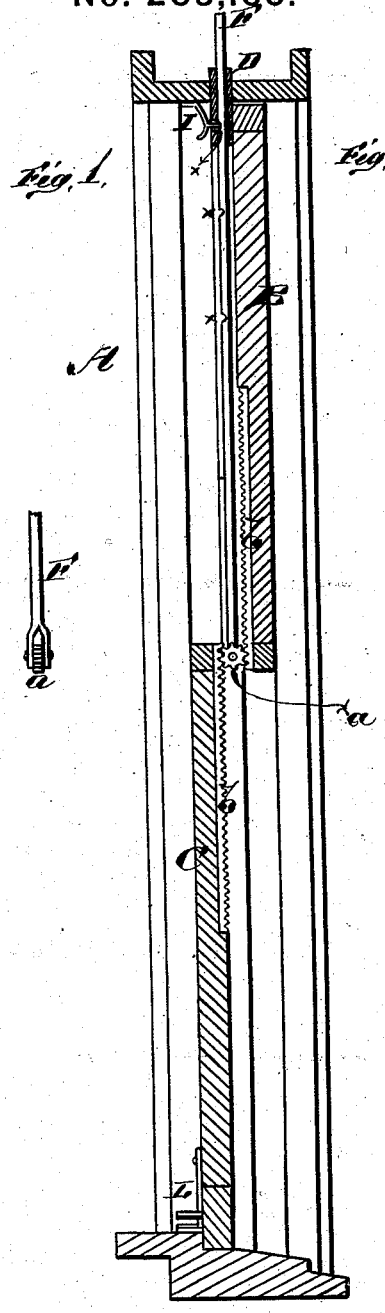
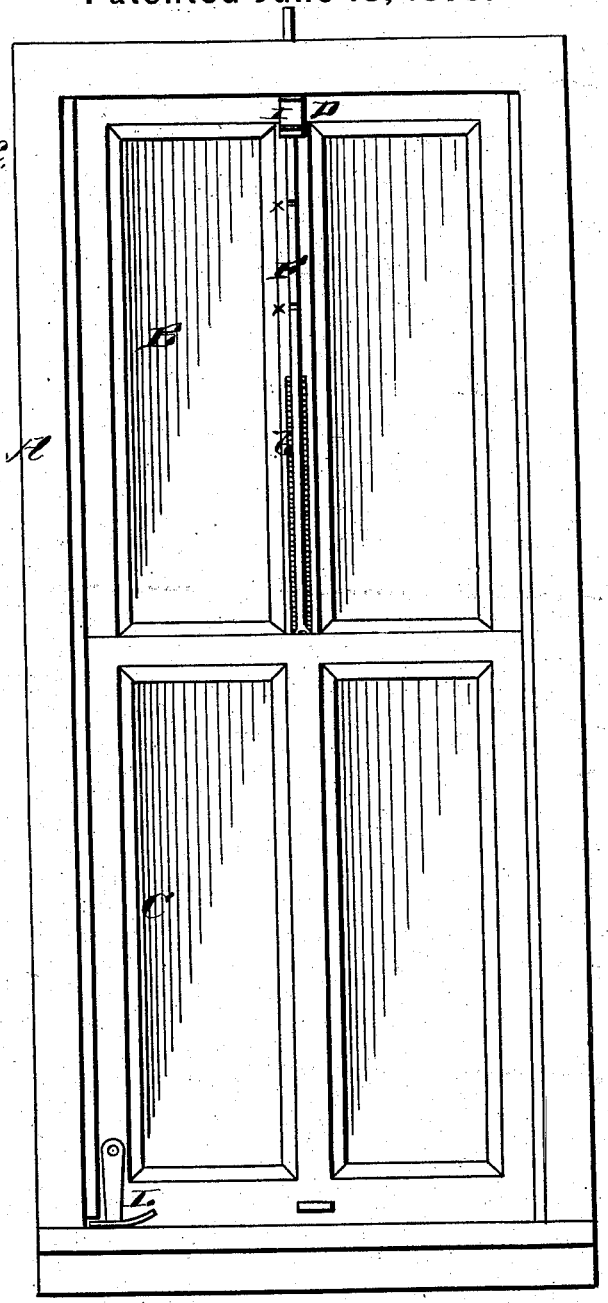


Fig. 2.



WITNESSES.

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JOHN F. ZIMMERMANN, OF NEW CASTLE, MISSOURI.

IMPROVEMENT IN SASH-FASTENERS.

Specification forming part of Letters Patent No. **205,166**, dated June 18, 1878; application filed April 27, 1878.

To all whom it may concern:

Be it known that I, JOHN F. ZIMMERMANN, of New Castle, in the county of Gentry and State of Missouri, have invented a new and valuable Improvement in Sash-Operators; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a vertical sectional view of a window-sash, showing my sash-operator, and Fig. 2 is a front view of a window with my sash-operator applied.

The nature of my invention consists in the construction and arrangement of a device for operating window-sash, as will be hereinafter more fully set forth.

The annexed drawing, to which reference is made, fully illustrates my invention.

A represents the window-frame, B the upper sash, and C the lower sash, constructed in any of the well-known and usual ways.

In the center of the cap of the frame A, immediately in front of the central vertical rail of the upper sash, is secured a tube or sleeve, D, through which is passed a shaft or staff, F, having notches *x x* at regular intervals, as shown. This staff is held at any point desired by means of a spring-catch, I, passing through a slot in the sleeve D, and entering one of the notches *x* in the staff.

The staff F extends down in front of the center vertical rail of the upper sash, and its lower end is forked, and has a pinion, *a*, mounted therein, which pinion meshes with rack-bars *b b*, secured in the vertical center rails of the two sashes, the one on the upper sash being on the inside and the one on the lower sash being on the outside, as shown.

When the staff is adjusted so that the pinion *a* is between the meeting-rails of the two sashes when these are closed, it will be seen that by raising the lower sash C the upper sash B is lowered exactly the same.

When it is desired to have a larger opening either at the top or bottom, the staff F must be adjusted down or up at the same time as the proper sash is either lowered or raised. The two sashes are, however, at all times balanced, and will remain at any height desired.

The staff F can equally as well be passed down through the sill of the window-frame as up through the cap.

The lower sash is provided with a lock, L, for locking the sash when closed.

What I claim as new, and desire to secure by Letters Patent, is—

1. In combination with the two sashes of a window, a vertical adjustable shaft carrying a pinion, and rack-bars attached to the sashes and meshing with said pinion, substantially as and for the purposes set forth.

2. The combination, with the frame A and sashes B C, of the tube D, with spring-catch I, the staff F, having notches *x x* and carrying the pinion *a*, and the rack-bars *b b*, substantially as and for the purposes set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN FRANKLIN ZIMMERMANN.

Witnesses:

CHAS. H. S. GOODMAN,

M. G. MORAN.