

(No Model.)

C. LOEWENSTEIN.

SASH HOLDER AND FRAME.

No. 260,213.

Patented June 27, 1882.

Fig: 1.

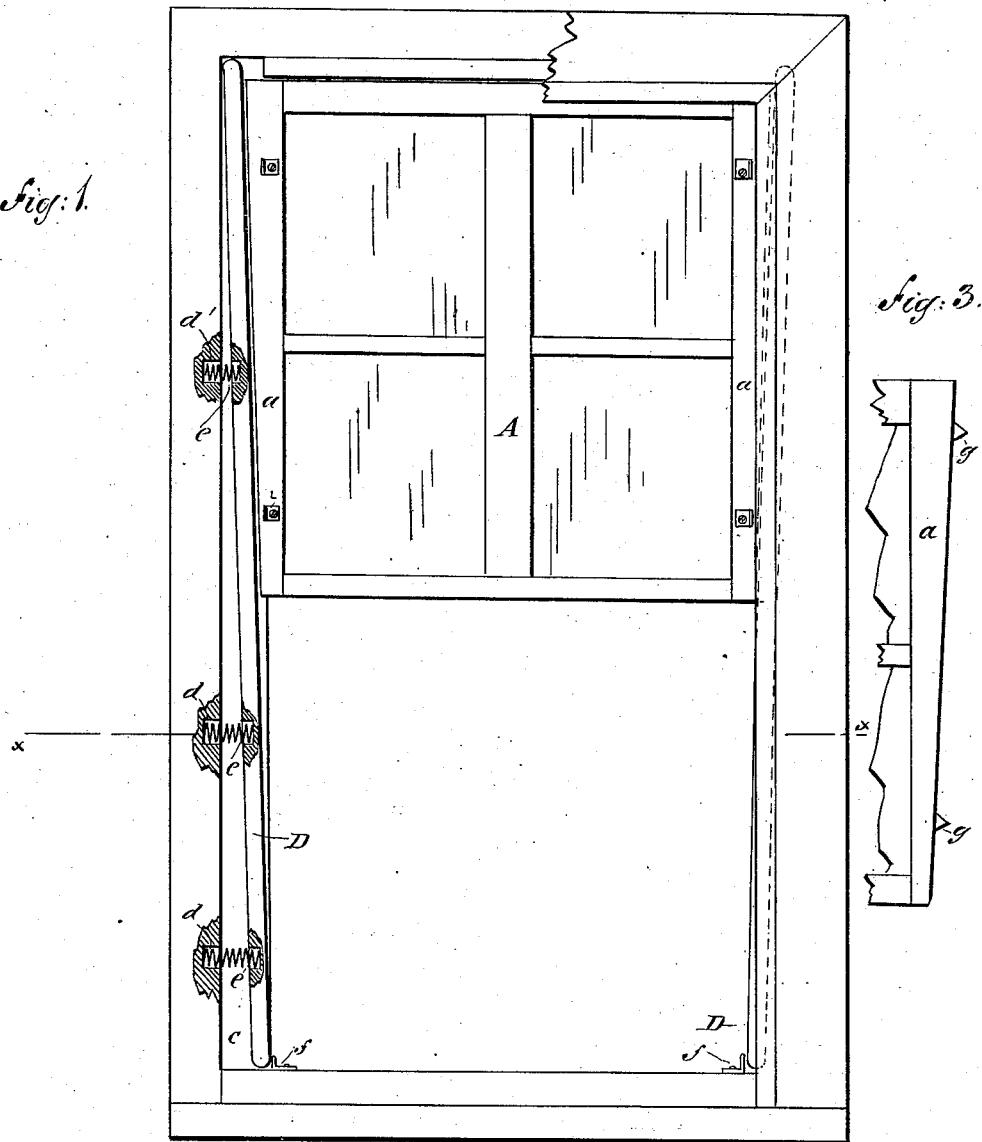


Fig: 3.

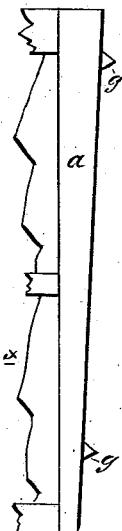
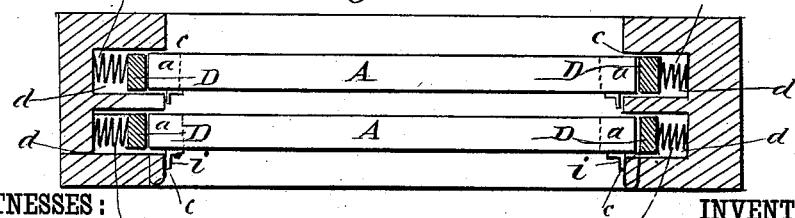


Fig: 2.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

CASPER LOEWENSTEIN, OF COLUMBUS, OHIO.

## SASH HOLDER AND FRAME.

SPECIFICATION forming part of Letters Patent No. 260,213, dated June 27, 1882.

Application filed October 27, 1881. (No model.)

To all whom it may concern:

Be it known that I, CASPER LOEWENSTEIN, of Columbus, in the county of Franklin and State of Ohio, have invented a new and useful Improvement in Sash Holders and Frames, of which the following is a full, clear, and exact description.

The object of my invention is such construction of the window-sash and window-frame that the sash will be held at any point in the frame without the use of weights and pulleys or similar expensive contrivances.

My invention consists in making the vertical side bars of the sash slightly diagonal from the bottom outwardly, or keystone-shaped, and providing the walls of the frame with bars, which are pressed outwardly by suitable springs against the diagonal edges of the side bars of the sash, the springs being arranged preferably so as to exert the greatest pressure below the longitudinal center of the said spring-bars.

My invention also consists in the details of construction, as hereinafter more fully described.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is an elevation of my improved sash and frame, part of the frame being broken away to better show the construction. Fig. 2 is a horizontal section of the same, taken on the line  $x-x$  of Fig. 1; and Fig. 3 is a detailed view, showing a modification.

The sash A is made keystone-shaped—that is, the vertical side bars  $a-a$  thereof are made wider at the top than at the bottom, as clearly shown in Fig. 1. The walls of the jamb or frame of the window are recessed, as shown at  $c-c$ , and in these recesses are placed the vertical bars D D, which extend the whole length of the jamb or frame. In the back of these recesses are formed the holes  $d-d$ , below the longitudinal center of the frame, and also the holes  $d'$  above said center, and in each of said holes are placed the coiled springs e, which serve to press the bars D D outward

against the vertical bars  $a-a$  of the sash with a constant pressure, the pressure, of course, according to the arrangement of the springs, being greatest at the lower ends of the bars.

Upon the window-sill are placed the stops f f, which prevent the bars from being forced out of the window-frame should the sash be removed for any cause, and the upper part of the frame may be provided with similar stops; or other means may be employed for keeping the bars in place when the sash is removed. Thus constructed, it will be understood that upon raising the window-sash the sash will be automatically held at any point in the frame by the force of the springs and the shape of the sash; and it will be understood that a tight joint will always be maintained between the frame and the sash.

In case the sash is very large and heavy, the edges of the side bars of the sash will be provided with the points g g, as shown in Fig. 3, which will engage with the spring-bars, and securely hold the sash at any point in the frame.

Upon the face of the side bars  $a-a$  of the sash are secured the stops i i, which run against the inner edges of the jambs of the window-frame, and serve to keep the sash at all times centered in the frame, and prevent the sash being forced to one side out of position should one set of springs happen to be of greater force than the other.

I am aware that pulleys and weights have been dispensed with and pulley-stiles replaced by four yielding pressure-strips, which act independently of catch or fastening; also, that it is not new to use yielding friction-strips in the casing to bear against the edges of sash, said strips being supported in the rear by springs; but

What I claim as new and of my invention is—

1. The keystone-shaped sash A, in combination with the spring-supported side bars D D, substantially as and for the purposes set forth.

2. In combination with a keystone-shaped sash, the spring-bars D D, arranged to exert

the greater pressure below their longitudinal centers, substantially as and for the purposes set forth.

3. The bars D D and the springs e, in combination with the keystone-shaped sash, substantially as and for the purposes set forth.

4. The keystone-shaped sash A, provided with the stops i i, adapted to run against the

edge of the jambs of the window-frame, in combination with the spring-supported bars D D, substantially as and for the purposes set forth.

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Witnesses:

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