

C. LAMSON.

Improvement in Sash-Balances.

No. 129,669.

Patented July 23, 1872.

Fig. 1.

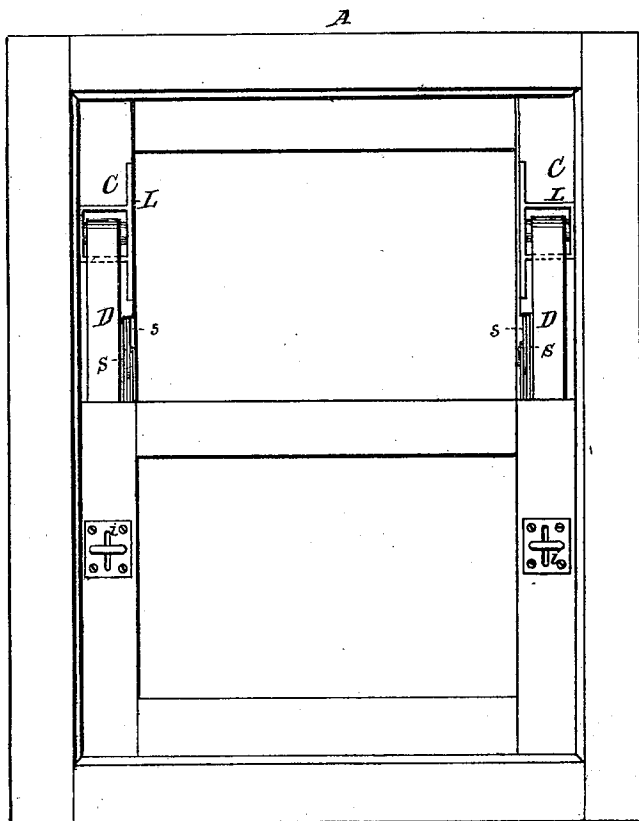


Fig. 2.

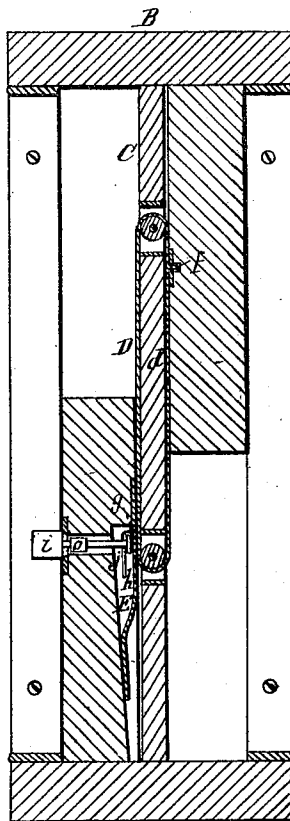


Fig. 3.



Fig. 4.

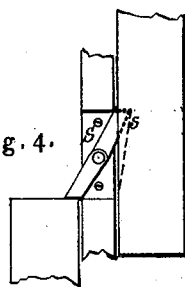
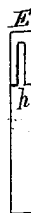


Fig. 5.



Witnesses

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# UNITED STATES PATENT OFFICE.

CALEB LAMSON, OF NEWBURYPORT, MASSACHUSETTS.

## IMPROVEMENT IN SASH-BALANCES.

Specification forming part of Letters Patent No. 129,669, dated July 23, 1872.

*To all whom it may concern:*

Be it known that I, CALEB LAMSON, of Newburyport, in the county of Essex and Commonwealth of Massachusetts, have invented and discovered a new, useful, and Improved Mode of Raising and Lowering Window Sashes and Blinds and Fastening the same, whereof the following is a true and full description and specification.

My invention relates to an improved method of hanging and fastening window-sashes; and it consists, first, in an endless metallic band passing over pulleys inserted in the parting-bead, said band having two tenons firmly soldered on it equidistant from each other, together with a socket in each side of the upper and lower sash, to receive the tenons; second, in a thumb-pin passing through the lower sash with its head inserted in a cavity in one end of a metallic spring-plate attached to the same and forming one side of the socket in the sash; third, in a fastener attached to the parting-bead for fastening the window, and also for holding the upper sash when the tenon is released from its socket in the lower sash.

In the drawing, Figure 1 is a front view of a window sash and frame, showing partially the above-named devices. Fig. 2 is a side view of a transverse section of the same, showing the band, pulleys, thumb-pin, and metallic spring-plate with cavity. Fig. 3 is a front view of the fastener, as indicated by letter S in Fig. 1. Fig. 4 is a partial side view of the fastener, parting-bead, and sashes, designed to represent one plate of the fastener resting in a shoulder in the top of the lower sash, and the other plate resting in a shoulder in the front side of the upper sash, and not in or against the bottom of the upper sash. Fig. 5 is a front view of the plate with cavity for receiving and holding the head of the thumb-pin.

Like letters of reference indicate like parts, presenting different views of the same in the different figures.

There is to be a parting-bead between the sashes, as indicated by letter C in Figs. 1 and 2. The band is made of firm, strong, and pliable metal, something more than twice the length of the shorter sash. The pulleys rotate in metallic holders. The band is firmly soldered together at its ends, after being passed over the pulleys. Two tenons, at right angles

to the side of the band and equidistant from each other, are firmly soldered on the outside of the band. The holders, indicated by letter L in Fig. 1, are fitted and fastened in the parting-bead, so as to draw the band taut. The parting-beads may now be fitted in the window-frame. The sockets in the lower sash are made so as to receive the tenons on the bands just above the lower pulleys when the sash is closed. The sockets in the upper sash are made to receive the corresponding tenons, so as to close completely the window. The thumb-pin consists of the thumb part *i* in Fig. 2, the shoulder part *o*, and the head *j*. The thumb part always projects in front of the sash. The shoulder part is a thin plate, which is concealed when the spring-plate E, Figs. 2 and 5, is pressed to the inner surface of the sash, and projects in front of the sash when the spring-plate E is drawn in to let the tenon on the band pass unobstructed. The head is circular and held in the cavity *h*, Figs. 2 and 5, and is made to rotate freely with the thumb-pin. The groove between the thumb part *i* and shoulder *o* is made to receive the plates fastened on the sash, as indicated in Figs. 1 and 2. The thumb-pin rotates freely, and is held in position by the plates fastened on the front of the sash, as indicated in Fig. 1. These plates—one each side of the thumb-pin—are put on and fastened after the thumb-pin is inserted in the sash. The use of the thumb-pin is to release the tenon on the band by withdrawing the plate E which forms one side of the socket. E, Figs. 2 and 5, is metallic plate with one end made capable of receiving and holding the head of the thumb-pin, and also forming one side of the socket for receiving tenon on band. Another thumb-pin, with plate E reversed, (not represented in the drawing,) forms the other side of the same socket, and is like the thumb-pin and plate E represented in Fig. 2. The groove in the lower sash is made the entire length of the sash. The fastener, indicated by letter S in Figs. 1, 3, and 4, on the drawing, consists of three metallic plates or strips held together by a bolt or pivot. The longest plate is fastened in the parting-bead. The bolt is made fast in the longest plate. The other two plates move freely on the bolt or pivot. The ends of the movable plates, which fall into the shoulders, are made at right angles with the sides of the plates.

One movable plate falls into a metallic shoulder fitted and fastened in the top of the lower sash. The other movable plate may fall into one or more metallic shoulders fitted and fastened in the front side of the upper sash. The purpose of the fastener is twofold—first, to hold the upper sash when the lower sash is released from the tenons on the band; and, second, to fasten the windows when closed.

The devices on each side of the window are alike.

*Claims.*

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an improved sash-balance, the endless metallic band *D* passing over pulleys or guide-blocks secured in holders within the parting-bead and having two equidistant tenons attached at right angles to the side of the band, fitting in corresponding grooves or recesses of

the sash, whereby both the upper and the lower sashes are carried, as described and shown.

2. In combination with the elements of the above claim, the thumb-pin *i* having shoulder *o* and rotating head *j*, and the spring-plate *E* having cavity *h* for the head of the pin, whereby the tenon on the band is released, and, when the plate is drawn in, allowed to pass unobstructed, all as shown and described.

3. In combination with the self-balancing sashes of a window, the holder or fastener *S* attached to the parting-bead, and consisting of three flat metallic strips or plates bolted or riveted together, two of which move freely on the pivot, whereby the upper sash is held in position or the window locked when closed, all constructed, arranged, and operating as described and shown, for the purposes set forth.

CALEB LAMSON.

Signed in presence of—

NATHANIEL PIERCE,  
GEO. W. BOWLEN.