

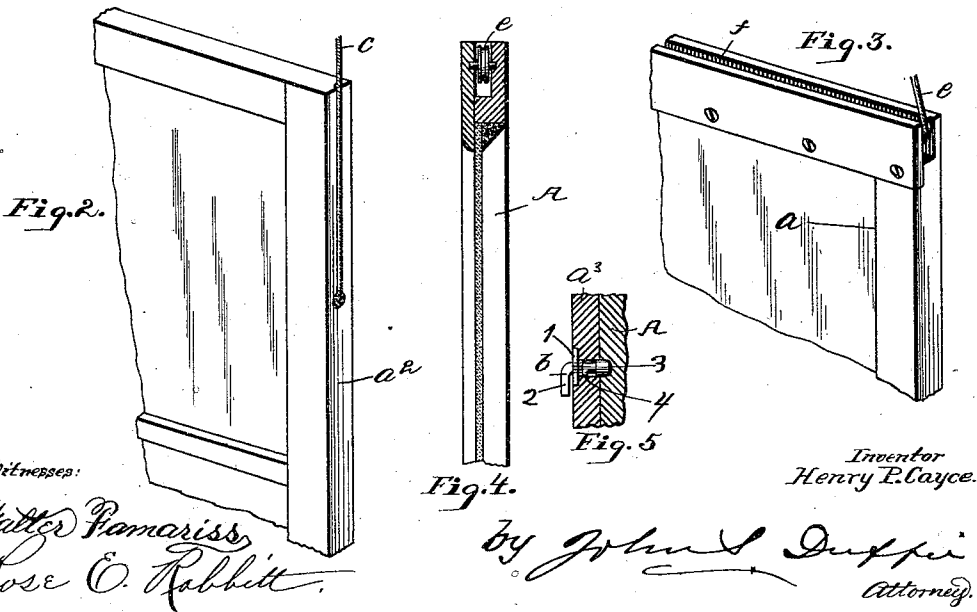
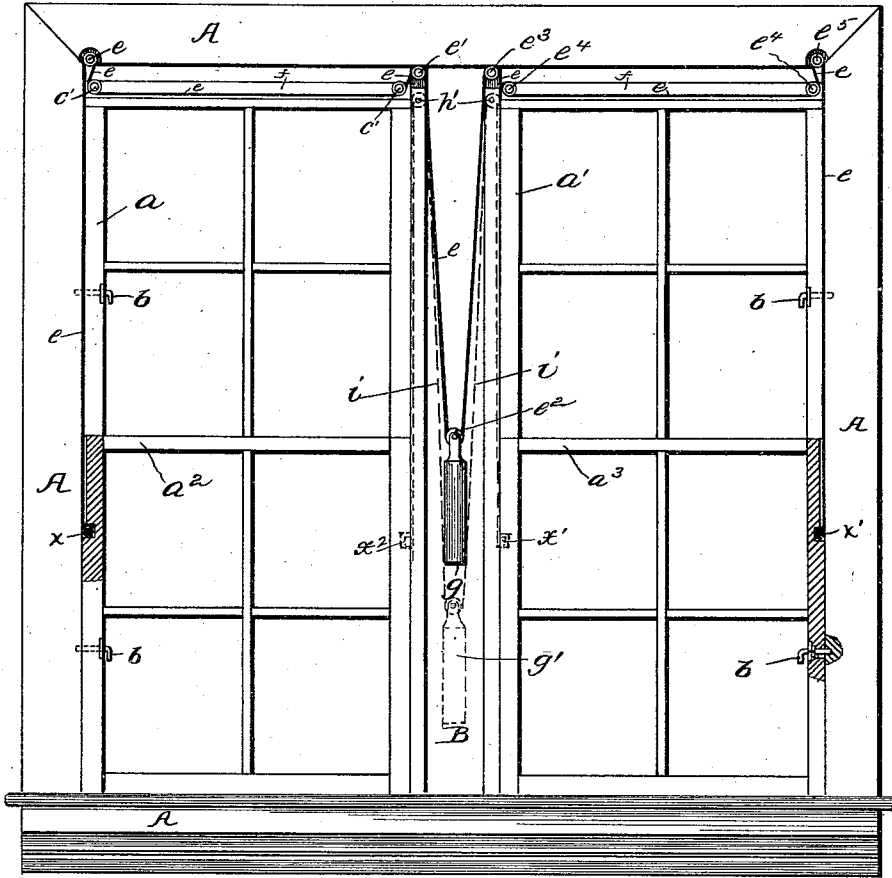
(No Model.)

H. P. CAYCE.
SASH BALANCE.

No. 543,848.

Patented Aug. 6, 1895.

Fig. 1.



Witnesses:

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Fig.4.

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UNITED STATES PATENT OFFICE.

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SASH-BALANCE.

SPECIFICATION forming part of Letters Patent No. 543,848, dated August 6, 1895.

Application filed August 15, 1894. Serial No. 520,418. (No model.)

To all whom it may concern:

Be it known that I, HENRY P. CAYCE, a citizen of the United States, residing at McGregor, in the county of McLennan and State of Texas, have invented certain new and useful Improvements in Sash-Balancing Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to window-sash balancing; and it consists of a window-frame having a central weight-box and window-sash on either side thereof, operated by a single cord running under and over pulleys and a single weight moving up and down in said weight-box, and a lock for locking the sash in place.

In the accompanying drawings, Figure 1 is a front elevation of a double window, the sash of which (four in number) are operated by a single cord and a single weight, but may have an additional cord and weight, as indicated by the dotted lines *i* and *g'*. Figs. 2, 3, and 4 are detail views of Fig. 1. Fig. 5 is a drawing showing part of the sash and jamb in section and my lock for locking said sash.

My invention is described as follows:

A represents the frame provided with a central weight-box B.

a represents the upper left-hand sash; *a'*, the upper right-hand sash; *a²*, the lower left-hand sash, and *a³* the lower right-hand sash. *b* represents the lock.

All four of the window-sash as represented in Fig. 1 are operated by one cord and one weight.

The cord *e* is secured in the grooved edge of the left-hand lower sash *a³* at point *x* in the ordinary way. It then passes up over a pulley *e'*, embedded in the lower face of the upper part of the frame A; thence down under the pulleys *c'*, embedded in the groove *f* in the upper part of sash *a*, (see Fig. 3;) thence up over pulley *e'*, attached to the lower face of the upper part of frame A; thence down under pulley *e²*, which runs in the bifurcated part of the neck of the weight *g*; thence up over pulley *e³*, attached to the lower face of the upper part of frame A; thence down under pulleys *e⁴*, embedded in the upper part of window-sash *a'*, (see Fig. 3;) thence up over pulley *e⁵*, embedded in the lower face of the

upper part of frame A; thence down to and having its lower end secured in the groove of the sash *a³* at the point indicated by *x'*.

The weight *g* is just sufficient to balance the window-sash. There is nothing to obstruct its upward or downward course, and consequently its movements are regular and steady.

When I wish to operate but one window-sash at a time I lock all the other sash and unlock the one I wish to move, and then I can move the sash freely with my hand, the cord adjusting itself accordingly. For instance, if I want to let down the upper left-hand sash *a*, I lock *a'*, *a²*, and *a³*. If I wish to operate two of the sash—for instance, *a* and *a²*—I lock sash *a'* and *a³*, and so on. I can operate any number of or all of the sash at once.

Where the windows are wide and heavy I use an additional cord (indicated by the dotted line *i*) and weight, (indicated by the dotted lines *g'*), in which case one end of the cord is secured to the inner edge of the lower window-frame *a²* at *x²*, and passes thence over pulley *h'*, thence under the pulley in the weight *g'*, thence over the second pulley *h'*, thence down, and is secured to the inner edge of the lower sash *a³* at the point *x'*.

My lock *b* consists of a plate 1, having a side slot in the same, and the said plate is attached to the window-sash by means of screws. The bolt consists of an elbow-arm 2, locking-arm 3, and a lug 4. The locking-arm passes through the window-sash and into a perforation in the window-frame. The lug 4 at this time is on the inner side of the plate, and as the elbow-arm 2 hangs down by gravitation the bolt cannot come out until the arm is turned out at an angle of ninety degrees, which brings the lug 4 in position to slip through the slot in the plate.

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

1. In a sash balancing device, substantially as shown and described, the window-frame A, having the single central partition or weight-box B; sashes *a*, *a'*, *a²* and *a³*, working in said frame; sashes *a* and *a'*, provided with grooves *f*; pulleys *c'* and *e⁴*, journaled in said grooves in the upper part of said sashes *a* and *a'*; pulleys *e*, *e'*, *e³* and *e⁵*, secured to the lower face

of the upper part of the frame A; cord *e*, secured to sash *a*², at point *x*, passing thence over pulley *e*, under pulley *c*¹, over pulley *e*¹, thence under pulley *e*², of the weight *g*, thence
5 over pulley *e*³, under pulleys *e*⁴, over pulley *e*⁵, and thence down along the edges of sashes *a*¹ and *a*³, and secured to sash *a*³, at the point *x*¹, substantially as shown and described and for the purposes set forth.

10 2. In a sash balancing device, the combination of the frame A, central weight-box B, weight *g*, operating in said weight box; cord

e, having its ends attached to the outer edges of the lower sash, thence running over and under pulleys secured to the top part of the top sash, and to the under face of the top part of the frame, substantially as shown and described and for the purposes set forth.

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

HENRY P. CAYCE.

Witnesses:

JAMES F. HELMS,

SAMUEL B. BAILEY.