E. J. REILLY.

SASH BALANCE.

APPLICATION FILED JULY 24, 1909.

962,387. Patented June 21, 1910.

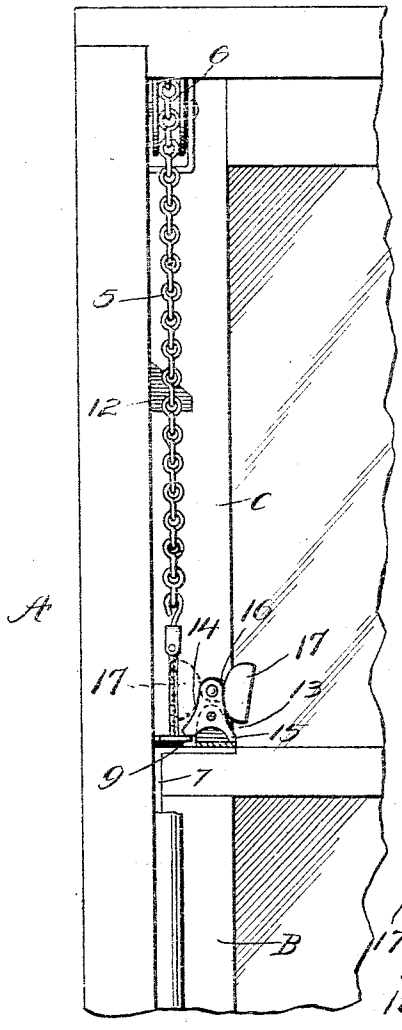

Fig. 1.

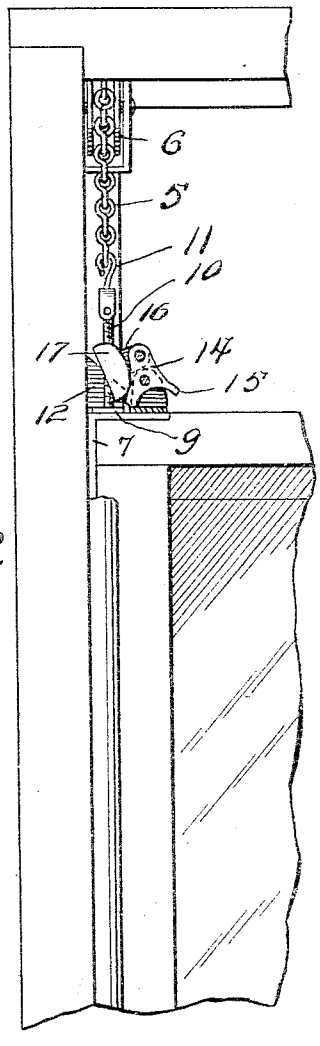

Fig. 2.

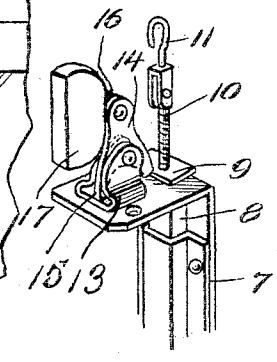

Fig. 3.

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UNITED STATES PATENT OFFICE.

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SASH-BALANCE.

962,387. Specification of Letters Patent. **Patented June 21, 1910.**

Application filed July 24, 1909. Serial No. 509,430.

To all whom it may concern:

Be it known that I, EDWARD J. REILLY, a subject of the King of Great Britain, residing at Eganville, in the Province of Ontario and Dominion of Canada, have invented new and useful Improvements in Sash-Balances, of which the following is a specification.

This invention relates to sash balances and it is an improvement on the device of this class for which Letters Patent of the United States, 905,580, were granted to myself on the first day of December, 1908. The said Letters Patent has reference to a device in which the sliding sashes of a window are adapted to counterbalance each other so that each sash will act as a balancing weight for the other sash, combined with means for permitting the opening of one sash without the corresponding opening of the other sash; said means consisting of a slide movably connected with the lower sash and having connection with the flexible element whereby the sashes are connected. In the Letters Patent above referred to the slide is retained in position for securing the window sashes in closed position by means of a catch having a lever extension or handle.

The present invention has for its object to improve the construction of the slide engaging catch and to provide actuating means for the same.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawing has been illustrated a simple and preferred form of the invention; it being however understood that no limitation is necessarily made to the precise structural details therein exhibited, but, that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawing: Figure 1 is an inside elevation of one side of a window equipped with the invention. Fig. 2 is a similar view showing the window sashes open. Fig. 3 is a perspective detail view illustrative of the invention.

Corresponding parts in the several figures are denoted by like characters of reference.

A designates the window frame or casing and B—C are respectively, the lower and the upper sash. Only one side of the sash and window frame has been shown, but it is to be understood that the remaining side is to be similarly constructed and equipped. The sashes are connected by a suitably guided flexible element such as a chain 5 which has been shown as being guided over a suitably located pulley 6.

Suitably connected with the side member or stile of the lower sash is a casing 7 wherein a slide 8 is mounted for vertical movement, said slide being provided at its upper end with an overhanging lip 9. Threaded into the slide is a screw-threaded rod 10 which is provided at its upper end with a connecting member such as a hook 11 whereby connection is made with the flexible element 5, the length of which may thus be regulated. Secured upon the window casing is a stop member 12 adapted to engage the slide 8 in the path of which the said stop member is located.

Suitably mounted upon the meeting rail of the lower sash is a bracket 13 upon which a catch 14 is pivoted, said catch being adapted to move into the path of the slide 8 so as to engage the projecting or overhanging lip 9, thus retaining the slide within the casing; the stop member 14 has an arm 15 which, when the stop is in engagement with the lip 9 of the slide 8, will engage the foot of the supporting bracket 13, thus limiting the movement of the stop and preventing accidental displacement thereof. Pivotally mounted upon an upward extension of, or adjacent to the upper end of, the stop member 13, is a lever 16 carrying a terminal weight 17 which is shouldered or offset from the face of the lever so as to engage either side of the stop member 14 according to the position of the lever. The weighted lever will obviously serve to tilt the lower end of the stop member 13 in a direction opposite to that at which the weight is disposed.

When the parts are adjusted as shown in Fig. 1, the lower end of the stop member engages the overhanging lip 9 of the slide which is thereby retained within the casing; the counterweight 17 being disposed adjacent to the side of the stop which is distant from the window casing. When the position of the lever 16 is reversed, to place the counterweight 17 adjacent to the inner edge of the stop member which is nearest the window casing, as shown in dotted lines in Fig. 1, the stop will still remain in frictional

engagement with the lip 9 until the lower sash is raised to the position shown in Fig. 2; the upper extremity of the slide 9 will then engage the stop member 12, and the slide will be forced downward merely sufficiently to release the frictional engagement between the stop 14 and the lip 9, thus causing the stop member to be swung out of the path of the lip by the gravity of the weight 17; to make the result of the operation certain, the slide 8 may be normally permitted to project a trifling distance above the casing, as indicated in Fig. 1. It will be obvious that when the lower sash is lowered from the position indicated in Fig. 2, the slide 8 will be free to leave the casing, thus permitting the sash to be lowered without a corresponding movement of the upper sash. To restore the parts to initial position, it is only necessary to again raise the lower sash until the slide 9 engages the stop 12 and is pushed back into the casing 7 by contact with said stop, the position of the lever 16 having been previously reversed so as to cause the overhanging lip 9 of the slide to be engaged by the stop member 14 actuated by the gravity of the weight 17.

From the foregoing description, taken in connection with the drawings hereto annexed the operation and advantages of this invention will be readily understood. It is simple in construction, easily applied and effective in operation.

Having thus described the invention, what is claimed is—

1. A window casing, sashes slidable therein, a slide connected with the lower sash and having an overhanging lip, a suitably guided flexible element connecting the slide with the upper sash, a stop member secured upon the window casing in the path of the slide, a pivotally supporting catch adapted to engage the overhanging lip of the slide, and a lever connected with the pivoted stop and carrying a weight adapted to engage either side edge of the stop.

2. In a device of the character described, top and bottom sashes, a slide connected with the lower sash, a flexible element suitably guided and connecting the slide with the upper sash, a stop member permanently supported in the path of the slide, a pivotally supported stop member adapted to engage the slide and pivotally supported gravity means adapted to engage either side edge of the pivoted stop to tilt the latter in either direction.

3. In a device of the character described, a window casing, top and bottom sashes, a slide connected with the bottom sash, a suitably guided flexible element connecting the slide with the upper sash, a stop member permanently supported upon the window casing in the path of the slide, a pivotally supported stop member adapted to engage the slide and having an arm whereby the movement of said stop member in one direction is limited, and pivotally supported gravity means whereby the pivoted stop member may be impelled in either direction.

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

EDWARD J. REILLY.

Witnesses:

GEORGE A. GOURLEY,

ADELE BIRCH.