(No Model.)

J. A. ROGERS.

SASH BALANCE.

No. 332,363. Patented Dec. 15, 1885.

Fig. 1.

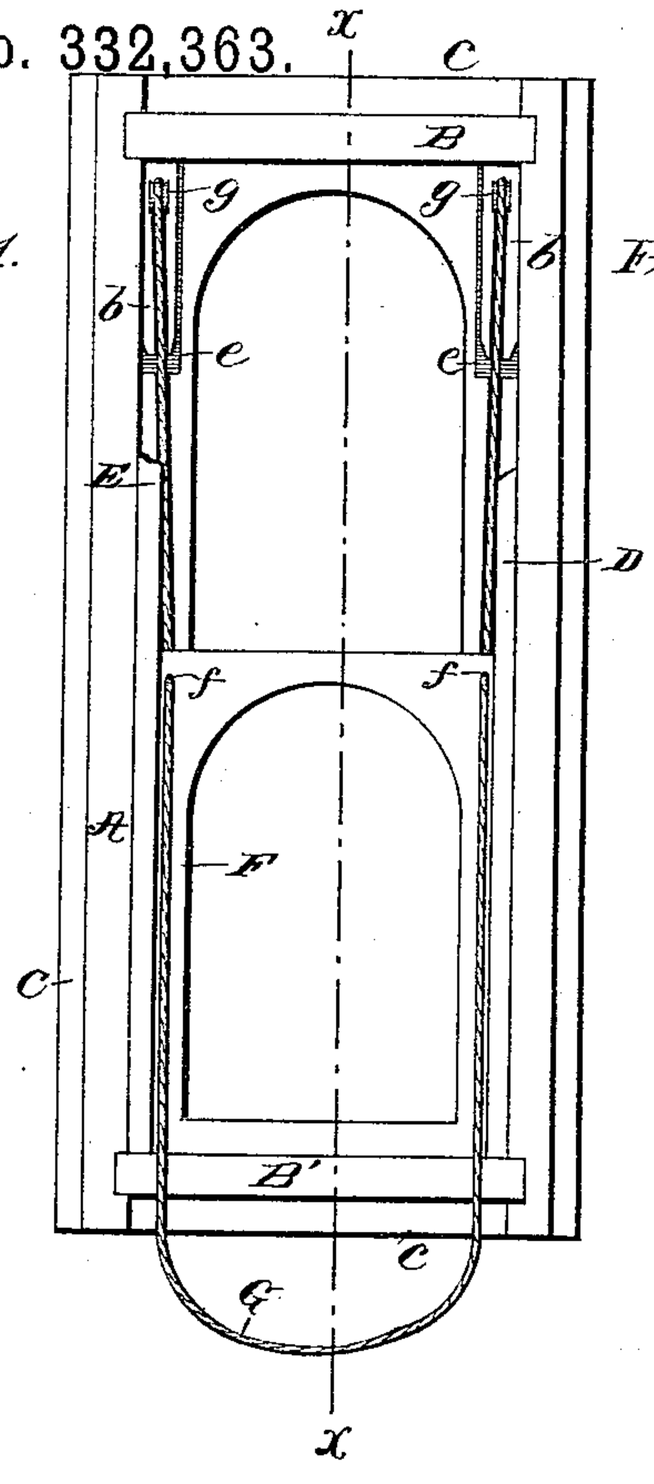

Fig. 2.

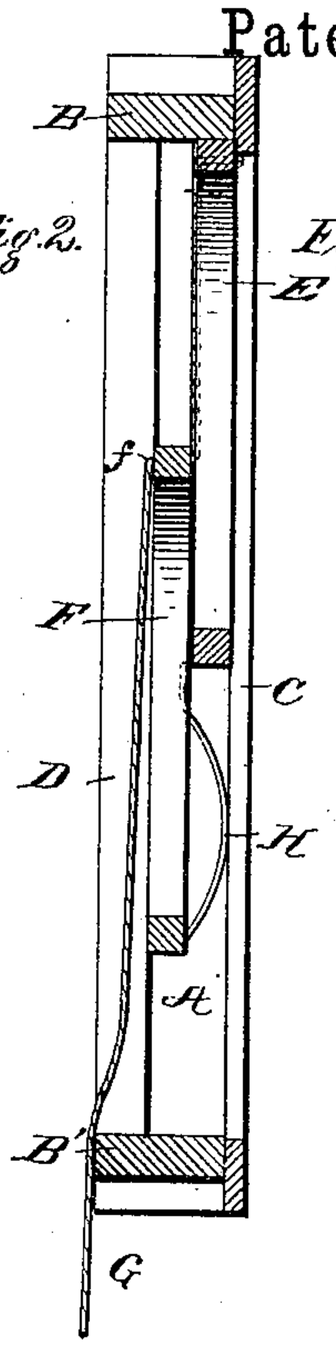

Fig. 3.

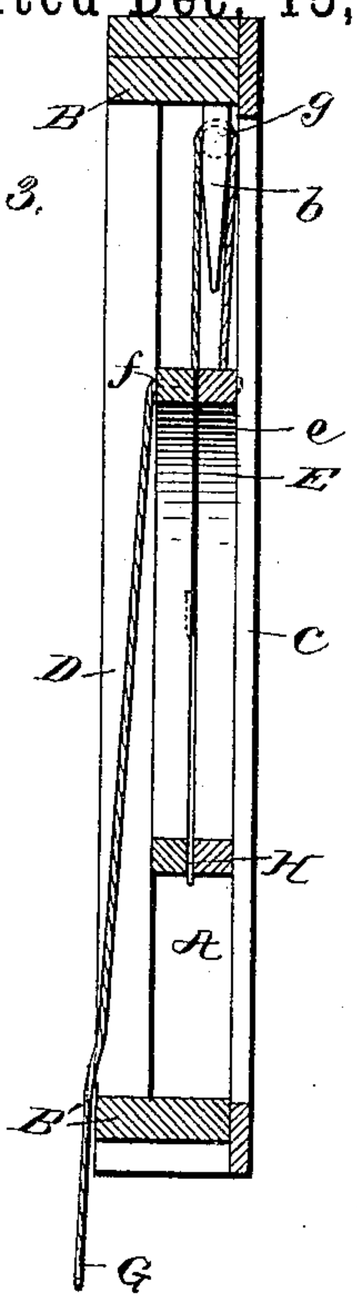

Fig. 4.

Witnesses
Wm. Rheem.
R. W. Bishop.

Inventor
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By his Attorneys,
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UNITED STATES PATENT OFFICE.

JOHN A. ROGERS, OF HARTSELL'S, ALABAMA, ASSIGNOR OF ONE-HALF TO JAMES M. ECHOLS, OF SAME PLACE.

SASH-BALANCE.

SPECIFICATION forming part of Letters Patent No. 332,363, dated December 15, 1885.

Application filed September 28, 1885. Serial No. 178,437. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. ROGERS, a citizen of the United States, residing at Hartsell's, in the county of Morgan and State of Alabama, have invented certain new and useful Improvements in Sash-Balances; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The object of my invention is to prevent the rattling of the window-sashes, and also hold them in any position to which they may be adjusted. These objects I attain by the combination of the several parts hereinafter fully described, and then pointed out in the claim.

In the drawings, Figure 1 is a front view of a window-frame provided with a pair of sashes hung according to my improved way, the upper portions of the beads being broken away to better show the interior construction. Fig. 2 is a section on the line X X of Fig. 1, showing the lower sash partly raised. Fig. 3 is a similar view showing both sashes in conjunction, the lower one being raised and the upper one lowered. Fig. 4 is a top view of the upper sash removed from the frame.

Similar letters represent corresponding parts throughout the various figures.

The window-frame is of ordinary construction, and may be of any approved form or shape; but for the sake of simplicity, and to better show the application of the improvement, the frame shown consists of side pieces, A, top and bottom cross-bars, B B′, respectively. Between the outer bead or casing, C, and the inner bead, D, is formed the space or guideways in which the sashes E and F slide. The side pieces of the sash E are provided with inclined channels or grooves *e* at their top, to receive brackets *b*, depending from the cross-bar B. The faces of these brackets coming adjacent to the bottom of the grooves have a corresponding inclination. These brackets are slotted near their upper ends, and carry pulleys *g*, over which a cord, G, attached to the sash E, passes. This cord, after passing over the pulleys, extends through transverse openings *f* in the sash F.

It will be noticed that there is no strip intervening between the two sashes, and in order that they may move in their relative planes, the lower one, preferably, is provided with a flat bowed spring, H, which is attached at its upper end to the lower portion of the sides of the sash, the bulged portion bearing upon the inner face of the casing C. As the lower end of this spring is free, the latter will become straightened when the sashes are passing over one another, as will be seen by referring to Fig. 3. Both sashes may be provided with these springs, if found necessary, although in practice it is found only necessary to provide the lower one with springs, as it is within easy reach and more liable to displacement. By reason of the cord being fixedly secured to one sash and adjustably secured to the other by simply passing through transverse openings therein, it is manifest that the one sash may be adjusted to any position independent of the other, as the cord will slip through the openings; but normally the length of cord between the sashes will be preserved, and the moving of the one sash may be made the means of moving the other. The grooves *e*, decreasing in depth from the top of the sash, and the brackets *b*, correspondingly inclined, permit a portion of the sash to come between the bracket and the casing, and as the parts are made to fit close there is no rebound of the sash when pushed up rapidly.

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

The combination of a frame, a pair of vertically-sliding sashes, a pulley-bracket pendent from the top of the frame and located within the path of the top sash, which is grooved to receive it, a bow-spring attached to the lower sash, and a cord passed over the pulley in the pendent bracket and adjustably connected with one sash and rigidly attached to the other, substantially as set forth.

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

JOHN A. ROGERS.

Witnesses:

W. A. BOYER,

S. I. LEMAY.