

(No Model.)

W. H. BELTON.
SASH BALANCE ALARM.

No. 533,778.

Patented Feb. 5, 1895.

Fig. 1.

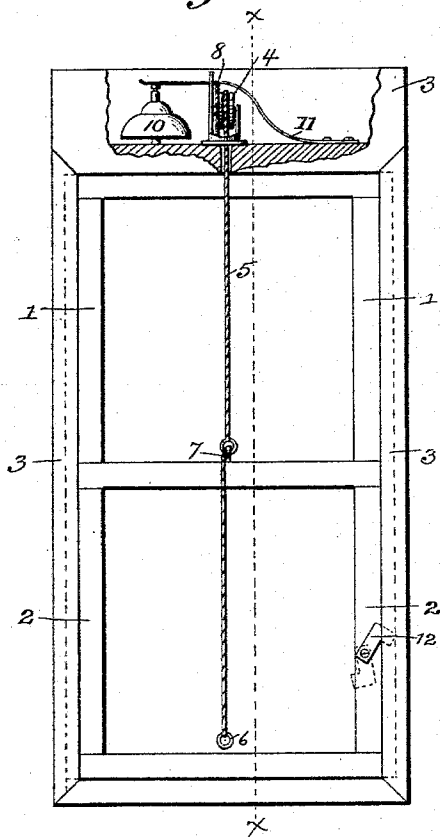


Fig. 2.

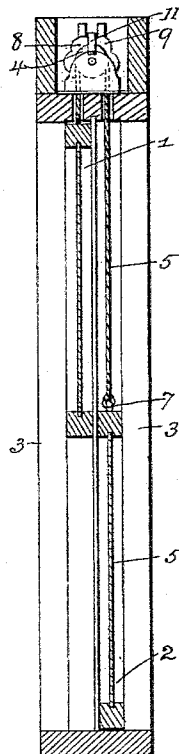


Fig. 3.

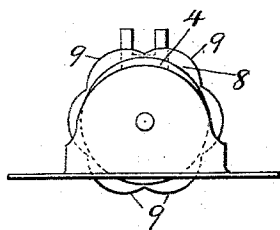
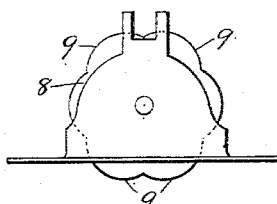


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM HENRY BELTON, OF MOUNT AIRY, NORTH CAROLINA, ASSIGNOR
OF ONE-HALF TO RICHARD K. MARSHALL, OF SAME PLACE.

SASH-BALANCE ALARM.

SPECIFICATION forming part of Letters Patent No. 533,778, dated February 5, 1895.

Application filed November 6, 1894. Serial No. 528,105. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY BELTON, a citizen of the United States, residing at Mount Airy, in the county of Surry and State of North Carolina, have invented a new and useful Combined Sash-Balance and Alarm Mechanism, of which the following is a specification.

My invention relates to window sashes, and has for its object to provide means for simultaneously operating the two sashes the one acting as a counter-weight for the other, the movement of the sashes at the same time sounding an alarm thereby giving instant notice to the occupants of the building when the sashes are being moved by an unauthorized person. In accomplishing these objects I employ the hereinafter described mechanism, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation of a window provided with my invention, a portion of the frame at the top being broken away to show the pulley receiving the sash balancing rope or cord, and the alarm mechanism. Fig. 2 is a vertical sectional view taken on the line $x-x$ of Fig. 1, and Figs. 3 and 4 are detail views of the pulley and cam plate.

Like numerals of reference indicate corresponding parts in the several views.

In the said drawings the numeral 1 denotes the upper sash, 2 the lower sash, and 3 the frame surrounding them. In the top rail of the frame 3 is secured the pulley 4 of the well known construction adapted to receive a rope or cord, 5, of hemp, wire or other suitable and well known material. This cord is attached at one end to the top of the upper sash 1 and at its other end has a ring 6 adapted to engage with a hook 7 fastened in the top of the lower sash 2. At a point some distance above this lower end of the cord 5 is an additional ring also adapted to engage the hook 7 as shown in Fig. 1. The object of this construction will be hereinafter described.

Referring now more particularly to Figs. 3 and 4 the numeral 8 denotes a plate permanently mounted on the bearing upon which the pulley 4 revolves and adapted to rotate

therewith. This plate is provided on its edge with a series of cam surfaces 9 as shown. Located in proximity to and to one side of the pulley is an alarm bell 10 of any suitable well known construction. A spring arm 11 is fastened at one end to the frame 3 and passes thence over the pulley 4 into operative position with respect to the striker of the alarm bell 10. In passing over the pulley 4 this arm is normally pressed by its own resiliency against the edge of the plate 8 so as to be vibrated by the cams thereon when the pulley 4 is rotated. This vibratory movement is imparted to the striking mechanism of the bell thereby ringing the same.

The operation of the device is as follows: The intermediate ring on the cord 5 is normally engaged with the hook 7 on the lower sash, said cord being of such length, as shown in Fig. 1, that any movement of one sash will be imparted to the other, the weight of the sashes balancing each other. Thus when the lower sash 2 is raised the upper sash 1 will be lowered to a corresponding extent. Any such movement of the sashes necessarily rotates the pulley 4 and plate 8 through the cord 5, thereby vibrating the spring arm 11 and ringing the alarm bell 10, thus giving instant notice of any tampering with the window by any unauthorized hands.

When it is desired to raise or lower either sash separately it is only necessary to disengage the intermediate ring from the hook 7 and engage therewith the ring 6, the additional length of cord being sufficient to permit the independent operation of either sash.

If desired two cords and pulleys may be employed, one at each side; in which case only one of them need be provided with the alarm mechanism.

I desire it to be understood that I do not limit myself to the specific alarm mechanism herein shown and described, as any other suitable mechanism may be employed provided that it be operated from the sash cord pulley 4.

Upon one of the sashes I locate a sash lock 12 consisting of a bent arm as shown in Fig. 1, pivoted to the sash and adapted when

thrown up to the position shown in dotted lines to jam against the frame and hold the sash against upward movement.

Suitable sash holders may be provided to retain the sashes when operated separately.

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

1. The combination with the two sashes of a window, of a sash cord connecting the tops of said sashes, an intermediate pulley over which said cord passes, and an alarm operated by the rotation of said pulley, substantially as shown and described.

2. The combination with the two sashes of a window, and a sash cord connecting the tops of said sashes, of a pulley over which said cord passes, a plate having cams on its periphery mounted on and rotating with the bearings of the sash cord pulley, an alarm, and a spring arm for sounding said alarm operated by the cams on the plate when the pulley is rotated by the sash cord, substantially as shown and described.

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Witnesses:

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