May 30, 1933. H. ROSENWALD 1,911,469

SASH LIFT AND STOP

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Fig. 1.

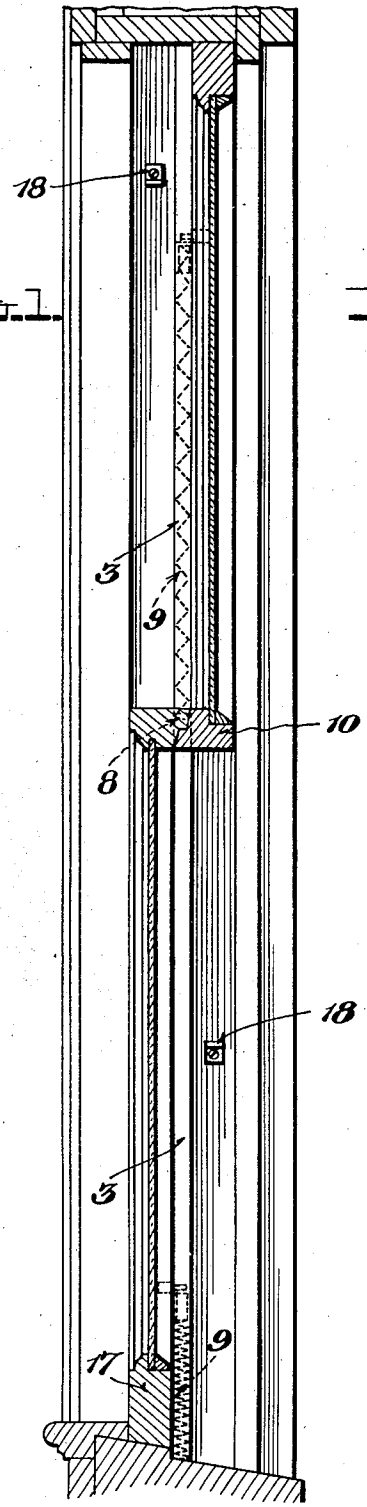
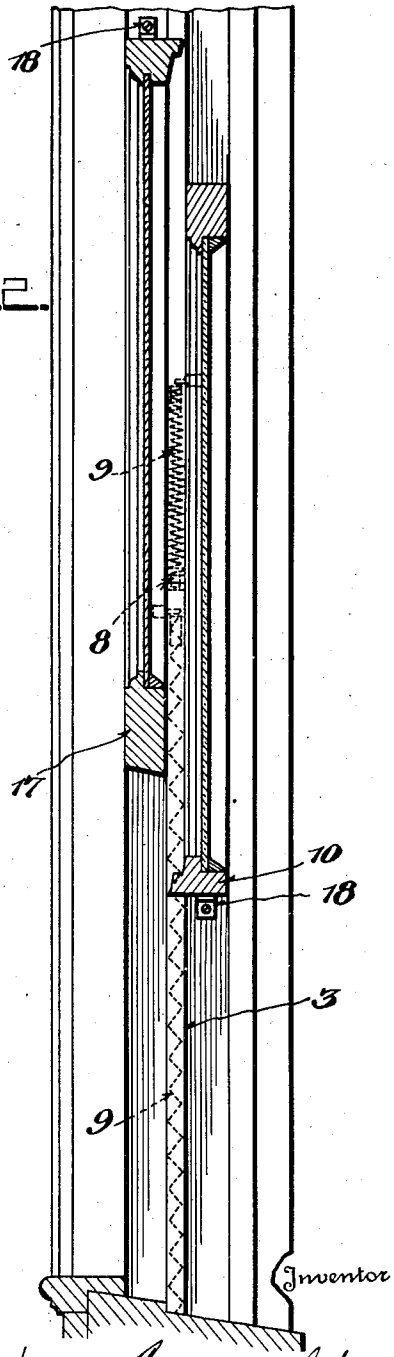


Fig. 2.



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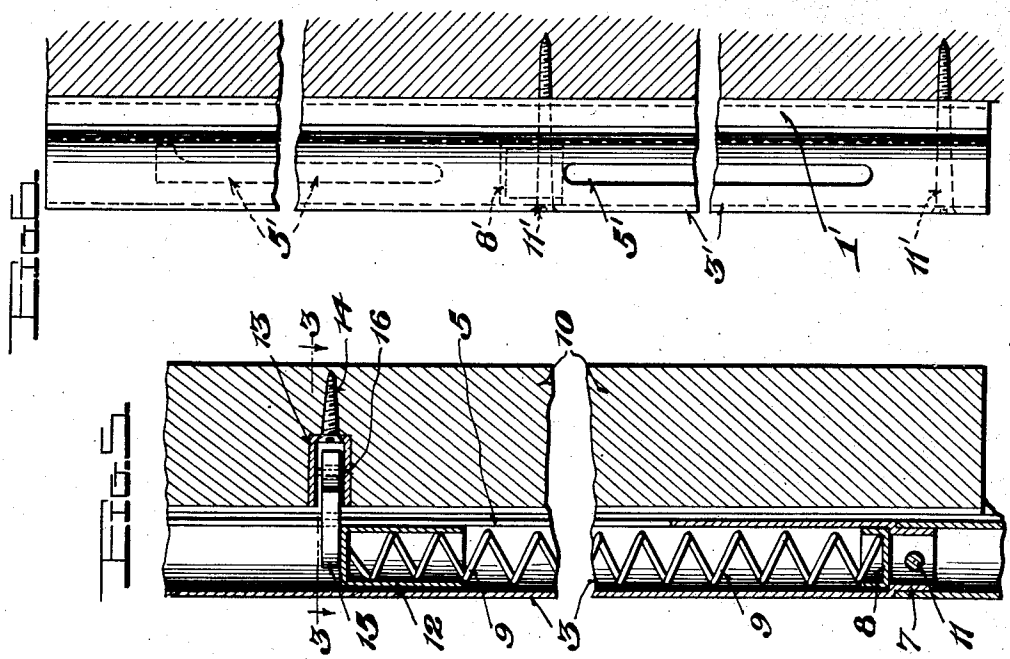
By A. W. Freeman

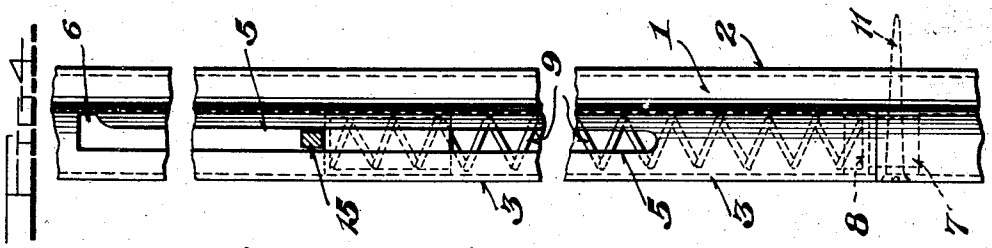
Attorney

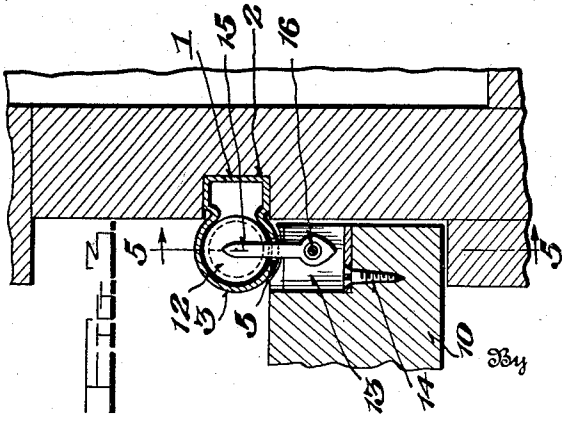
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UNITED STATES PATENT OFFICE

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SASH LIFT AND STOP

Application filed February 20, 1932. Serial No. 594,327.

This invention relates to window sash lifts and has for its primary object to provide novel means in substitution of the customary ropes and weights for counterbalancing the sash so as to hold same in any position to which it may be moved.

A further object of the invention is to provide a device of this kind which is extremely simple, which is composed of a minimum of parts and which can be easily and quickly applied to the window structure.

A still further object of the invention is to provide a device of this type which can be positioned in the groove for holding the usual parting strips.

The invention has further and other objects which will be later set forth and manifested in the course of the following description.

In the drawings:

Fig. 1 is a vertical sectional view showing the device applied to a window structure;

Fig. 2 is a similar view showing the windows open;

Fig. 3 is a section on line 3—3 of Fig. 5;

Fig. 4 is an enlarged fragmentary side elevation of the parting strip;

Fig. 5 is a section on line 5—5 of Fig. 3; and

Fig. 6 is a side elevation of a modified form of parting strip.

In proceeding in accordance with the present invention, a parting strip is employed which has an inner portion 1 that is of substantially U-shape in cross section and which is of a size to fit in the usual groove 2 for receiving the parting strips employed in connection with rope and weight counterbalancing devices of customary form. An outer portion 3 of substantially C-shape in cross section is formed integral with the free sides of the portion 1. The outer portion 3 of the parting strip is further formed with longitudinal slots 5. The parting strip may be made in two sections as shown in Fig. 5 and accordingly the lower end of the upper section is formed of reduced diameter as shown at 7 and telescopes within the upper end of the lower section. The reduced end of the upper section forms a shoulder upon which a cup 8 that is fitted within the upper section engages, the cup forming a seat for the lower end of the coil spring 9 for the upper sash 10. Screws 11 are employed to secure the strip in the groove 2. Referring to Fig. 5 a cap 12 is slidably fitted in the outer part 3 of the parting strip and receives the upper end of the coil spring on its interior. A housing 13 is secured by a screw 14 in an opening provided therefor in the sash 10 and has an open end which confronts the portion 3. A finger 15 is pivoted at 16 in the housing 13 at one end and has its opposite end freely resting upon the cap 12, the finger extending through the slot 5. It will be understood that a similar housing and finger structure is provided for the lower sash 17 and stops 18 are preferably positioned in the guides for the sash so as to restrict their opening movements.

From the foregoing it will be seen that but a single parting strip is provided which houses each of the springs 9 and which can be easily and quickly applied in position, the springs acting to counterbalance the sash or to hold same in any position to which they may be moved. The purpose of the pivoting of the finger 15 is to provide for expansion or contraction of the sash or movement thereof which might cause binding or friction of the finger against the walls of the slots 5. The slots are of course located on opposite sides of the portion 3 and the slot for the upper sash may have a right angular extension 6 as shown in Fig. 4 to receive the finger 15 when the upper sash is in closed position to assist same in being held by the spring. As shown in Fig. 6 the parting strip may be made in one piece, and otherwise is identical with the structure shown in the remaining Figs. and has the inner portions 1′ and 3′ and the slots 5′. In this form however, a cup 8′ for the lower end of the upper spring is secured by one of the screws 11′ on the interior of the portion 3′.

What is claimed, is:

1. In combination with the upper and lower sashes of a window, tubular parting strips each having a portion of substantially U-cross-section formed to be received in the

parting strip groove of a window frame and having an outer longitudinally slotted portion of substantially C-cross-section integral with the free sides of the U-portion, coil-springs in the outer portions of the strips, tubular caps engaged over the upper ends of the springs, housings secured in the sides of the sash and having open outer ends which substantially aline with the slots of the strips, and horizontal fingers pivoted at one end within the housings and having their opposite ends free and extending through the slots of the strips and seating on the closed ends of the caps.

2. In a device of the type set forth, parting strips each composed of a tubular slotted member having a part to be received in the parting strip groove of a window frame, a pair of coil springs in each of said members, caps on the upper ends of the springs, fingers pivoted at one end to the window sash and having free ends which extend through the slots and are engaged with the closed ends of the caps, and means to hold the lower ends of the upper springs against downward movement.

3. In a device of the type set forth, parting strips each composed of a tubular slotted member having a part to be received in the parting strip groove of a window frame, said strips being formed in sections, the lower ends of the upper sections being reduced and telescoped in the upper ends of the lower sections, cups in the upper sections seated on the shoulders resultant from the reduced ends, a pair of coil springs in each member, the upper of which have their lower ends received in the cups, caps on the upper ends of the springs, and fingers pivoted to the window sash and extending through the slots of the members and having ends which are engaged with the closed ends of the caps.

4. In a device of the type set forth, parting strips each composed of a tubular slotted member having a part to be received in the parting strip groove of a window frame, said strips being formed in sections, the lower ends of the upper sections being reduced and telescoped in the upper ends of the lower sections, a pair of coil springs in each member, and means carried by the window sash and extending through the slots of the tubular members and engaged with the springs whereby the window sash is tensioned.

5. In a device of the type set forth, parting strips each composed of a tubular slotted member having a part to be received in the parting strip groove of a window frame, a pair of coil springs in each member, means to secure the lower end of the upper coil spring in each member against downward movement, and means carried by the window sash and extending through the slots of the members and engaged with the upper ends of the coil springs whereby the window sash are tensioned by the springs.

6. In a device of the type set forth, a pair of tubular parting strips having slots, a pair of coil springs in each strip one for each of two window sash, means to hold the lower ends of the upper springs against downward movement, and means pivoted to the window sash and extending through the slots of the strips and engaged with the upper ends of the springs to hold the window sash under tension.

7. In a device of the type set forth, a pair of hollow parting strips having slots, tensioned means mounted within each of said strips, and means movably connected to the window sash and extending through slots of the strips and engaged with said tensioned means whereby to counterbalance the window.

In testimony whereof I affix my signature.

HARRY ROSENWALD.