J. T. COCKEY.

AUTOMATIC WINDOW SASH CLOSER.

APPLICATION FILED NOV. 26, 1917.

1,279,843. Patented Sept. 24, 1918.

Fig. 1.

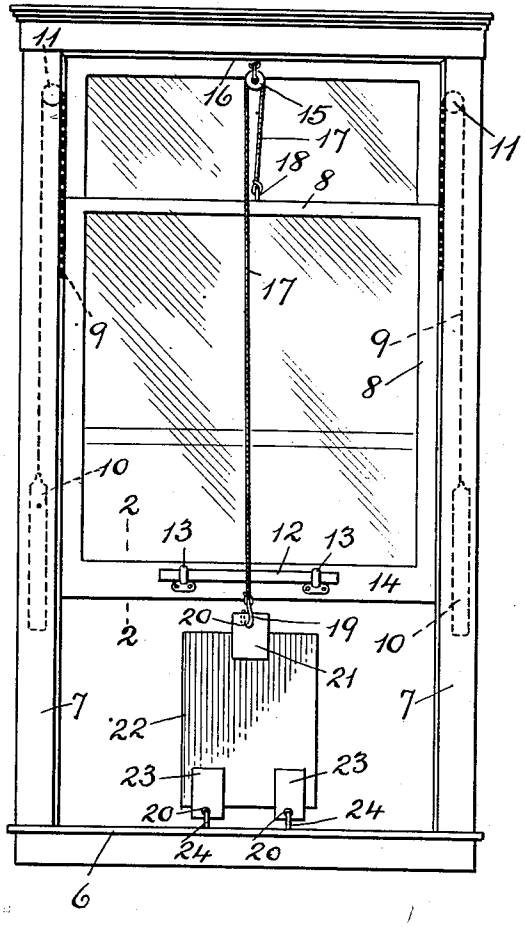


Fig. 4.

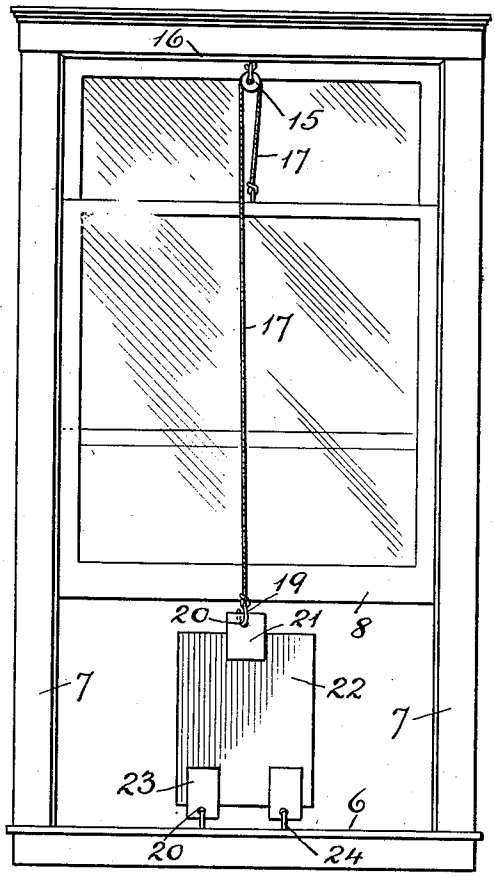


Fig. 2.

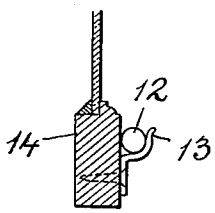
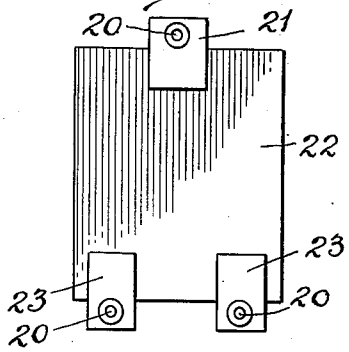


Fig. 3.



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AUTOMATIC WINDOW-SASH CLOSER.

1,279,843. Specification of Letters Patent. Patented Sept. 24, 1918.

Application filed November 26, 1917. Serial No. 204,006.

To all whom it may concern:

Be it known that I, JOSHUA T. COCKEY, a citizen of the United States, residing at Baltimore, State of Maryland, have invented certain new and useful Improvements in Automatic Window-Sash Closers, of which the following is a specification.

This invention relates to an automatic window-sash closer operable by a rain storm.

One object of this invention is to provide a new and very simple combination of few parts for holding the lower sash of a window in the partly-raised or open position, and which combination upon the occurrence of certain conditions will disassociate and cause the sash to close downwardly.

Other devices for accomplishing the above stated purpose have the practical objection that their organization includes too much mechanism, their construction being too complicated, and their higher cost having the effect to prevent their adoption and use.

The invention is illustrated in the accompanying drawing and the same will first be described and then pointed out in appended claim.

In the drawing:

Figure 1, is an elevation of an ordinary window and its vertically-movable sashes with the usual counter-balancing-weights as viewed at the inner side of the room, and shows the parts associated to constitute my invention.

Fig. 2, is a vertical cross-section of the lower rail of the sash on the line 2—2 of Fig. 1.

Fig. 3, shows the paper open-sash retainer.

Fig. 4, is an elevation of a window whose sash are not balanced by cords and weights, and shows the sash-closing devices of the present invention.

Referring to the drawing by designating numerals, the window frame has an ordinary sill, 6, two side uprights, 7, which may have the well-known sash-weight boxes or may be without them, as in Fig. 4. The lower sash, 8, in Fig. 1 moves vertically and is designed to be counter-balanced by cords, 9, having weights, 10, and running over pulleys, 11. The lower sash, 8, is shown in Fig. 1 raised from the sill and is about halfway open. Should the occupant of the room desire to go out and leave the room vacant for an hour or two, he would in the absence of an automatic window-sash closer have to pull down the lower sash, 8, to close the window to make sure that the contents of the room would not be damaged during his absence if a rain-storm should occur. Should the occupant desire that the lower sashes during his absence remain partly open for ventilation or any other purpose, he may safely do so by using on the window sash the means now to be described.

Referring now to Figs. 1, 2 and 3; as the vertically-movable sash shown in Fig. 1 is counterbalanced in the frame in the well-known way, by using cords, weights and pulleys, the first step is to add directly to the lower sash 8 a weight in any approved manner; this added weight overcomes the counter-balance referred to, and causes the sash to have a preponderance of weight in consequence of which that particular sash will automatically close by gravity or moving down until it contacts with the sill.

In the present instance the added weight, 12, is in the form of a short bar or rod of metal, say iron, of size sufficient to make the requisite weight. This bar or rod, 12, may be in a horizontal position and be supported on hooks, 13, which are secured to the lower rail, 14, of the sash as shown. It is to be understood that the weight to be added to the sash may have a form different from that shown and designated, 12.

The second step is to provide means that will temporarily overcome the tendency of the half-raised lower sash, with its added weight, 12, to close by gravity.

This last means referred to consists of a pulley, 15, fixed to the top, 16, of the window-frame, a cord, 17, one end of which is attached to said lower sash 8, at any point and in any manner as at, 18; said cord extends upward to and passes over the pulley 15, and thence the cord extends downward past the lower sash and at its lower end the cord has a hook, 19, that engages in the hole, 20, of the topmost reinforcing tab, 21, secured to the thin paper, 22. The thin paper has at its lower end two reinforcing tabs 23, each of which has a hole, 20, and said two lower tabs engage hooks, 24, fixed to the window sill, 6. By this arrangement one end of the cord, 17, is attached to the half-raised lower sash and passes over the elevated pulley, and the other end of the cord is attached to the upper end of the thin paper 22, which at the outset should be in a dry condition and its lower end secured to the window sill. The thin paper 22, being

dry has its maximum strength when pulled straight; under these conditions the half-raised lower sash is prevented from closing downward.

When the several parts of the window-sash closer are applied as shown in Fig. 1, and as here described, should falling rain be driven toward the open window the thin paper 22, would become wet, which weakens or destroys its strength, and thereupon the weight of the partly-raised sash with the weight 12, carried directly thereon will operate to rupture the paper, 22, and close the sash, and thus prevent rain from entering the room.

Fig. 4 shows the window-sash closer as applied to a window whose sash are not counter-balanced by weights. In this figure the sill 6, and the vertically-moving sash, 8, are the same as in Fig. 1 but there are no cords or weights, and there is no extra weight in any way added or attached to the lower sash, such as that designated 12, in Fig. 1. Of course in this old-fashioned window the upper sash must be sustained in some convenient manner, in a constantly-closed or upward position. The lower sash, 8, may be raised from the sill and ordinarily when this improved device is not in use sustained at any height by some familiar means. When unsustained the lower sash by virtue of its own gravity would fall, and when this sash is closed it will remain seated on the sill until lifted by manual effort.

The operative parts of this invention when used in the form of window shown in Fig. 4, comprise the pulley, 15, at the top, the cord 17, the upper end of which is attached to the lower sash 8 and the cord passes over said pulley and then the lower end of the cord engaged with the topmost part of the thin paper, 22; then the lowermost part of said thin paper is engaged by hooks, 24, with the window sill, 6. This feature of the present invention serves to hold the lower sash in a partly-raised position. Should falling rain wet the thin paper the latter would be weakened and would instantly rupture or tear apart due to the continued strain caused by the sash 8, weight 12, and cord 17 producing an upward pull on said paper and then the sash would fall to its closed position.

The thin paper 22, is shown in the form of a small sheet, and it is, in practical effect, a link or part in the flexible connection of which the cord, 17, is also a part, connecting between the static sill, 6, and the vertically-movable sash, 8.

While rain has been referred to as a cause most likely to rupture the thin paper, 22, when in use, it is obvious that this paper may be ruptured by a wind-storm, or by fire coming in the open window should fire happen to occur in an adjoining house. My invention therefore is applicable as a useful device for any cause that may rupture the paper when used as herein described.

Having described my invention I claim:—

The combination of a vertically-movable sash; weights counterbalancing said sash; an additional weight resting directly on and carried by said sash but readily removable therefrom, this weight serving to overcome said counterbalance; a sheet of thin paper the lower end of which is made fast to the window-sill of the frame in which the sash moves; a pulley-bearing positioned on the frame higher than said sash; and a cord having one end attached to the upper end of said sheet of thin paper and the other end of the cord connected with the said sash while a part of the cord intermediate of its two ends is movable over said pulley bearing.

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

JOSHUA T. COCKEY.

Witnesses:

CHAS. B. MANN,

HELEN B. WUNDER.