

(No Model.)

2 Sheets—Sheet 1.

S. C. TAYLOR.
WINDOW.

No. 559,468.

Patented May 5, 1896.

Fig. 1.

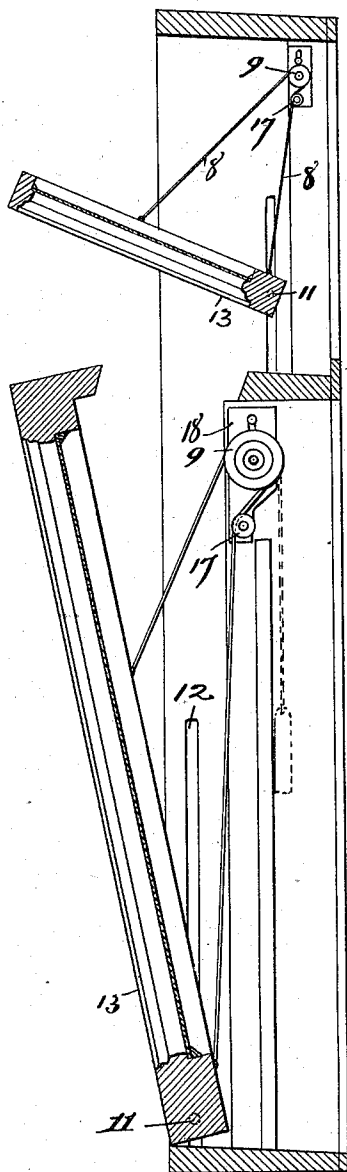
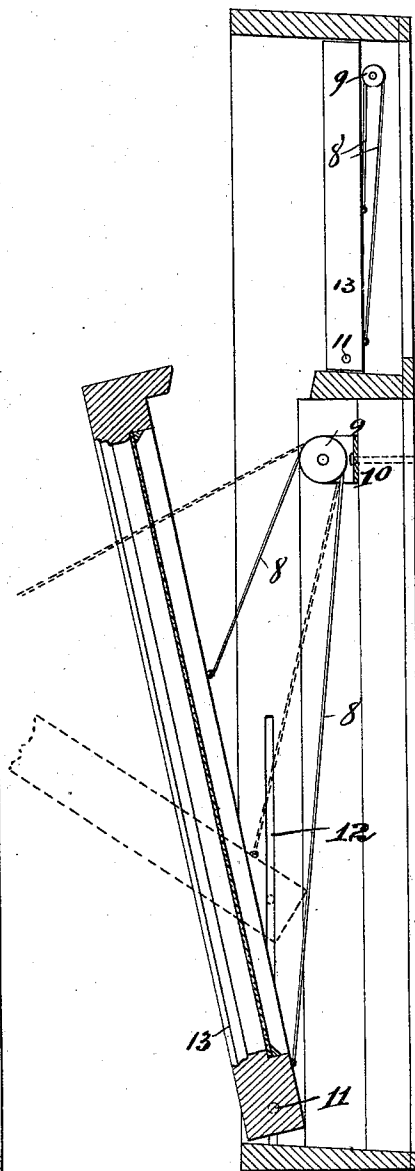


Fig. 2.



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(No Model.)

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WINDOW.

2 Sheets—Sheet 2.

No. 559,468.

Patented May 5, 1896.

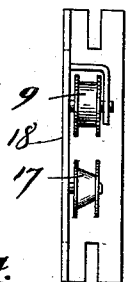


Fig. 5.

Fig. 4.

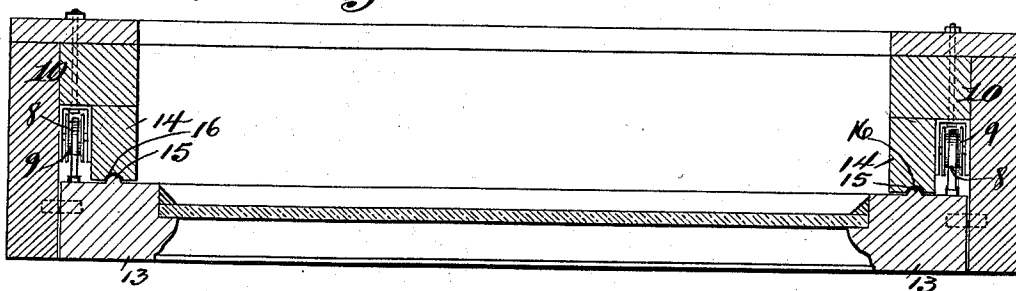


Fig. 3.

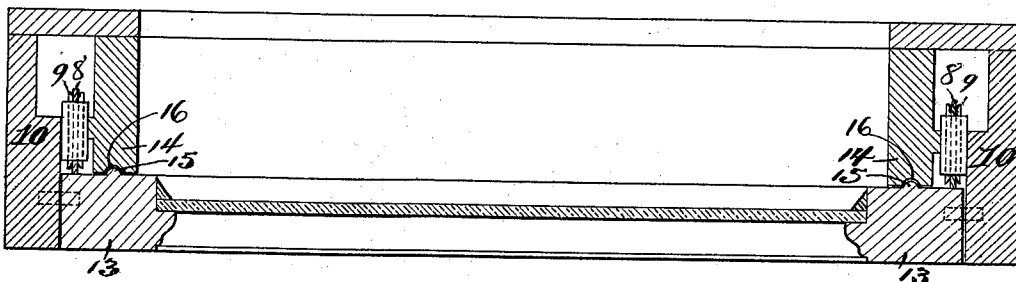
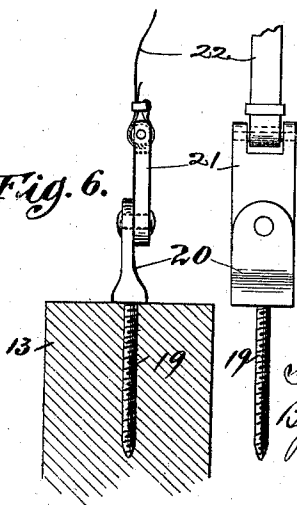


Fig. 6.

Fig. 7.



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UNITED STATES PATENT OFFICE.

SAMUEL C. TAYLOR, OF CHICAGO, ILLINOIS.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 559,468, dated May 5, 1896.

Application filed September 16, 1896. Serial No. 562,650. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL C. TAYLOR, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Windows, of which the following is a specification.

This invention relates to a novel means for hanging window-sashes, and is particularly adapted for the hanging of what are known as "transom" and "single" sash; and the object of the invention is to hang the sash in such manner that it may be tipped out of the frame for the purpose of cleaning it or for ventilation.

The principal feature of my invention is to hang windows without the employment of counterbalancing-weights; and this I accomplish by the peculiar manner in which the sash-cords are connected with the sash.

My invention may be applied to windows having the usual weight-pockets, but in new work such pockets may be entirely dispensed with. I have shown both forms in the drawings, in which—

Figure 1 is a vertical transverse section through a window-frame having the usual weight-pocket and provided with a small and a large transom-sash. Fig. 2 is a similar view of a window-frame having no weight-pocket therein, the transom or upper sash in this case being closed. Figs. 3 and 4 are sectional plan views of the construction shown in Figs. 1 and 2, respectively. Fig. 5 is a detail view of a sheave and guide-pulley mounted upon a frame. Figs. 6 and 7 are respectively an edge and plan view showing a broken section of a metal suspending-tape and the means of connecting it to the sash.

In carrying out my invention I connect to the side bar of the sash, on one or each side and above its mid-height, one end of a suspending cord or tape 8, said cord or tape pass-over a suitable sheave or pulley 9, secured to the window-frame 10. The lower end of the cord is then connected to the sash toward its bottom, the points of connection being such with relation to the height of the window and to the position of the pulley or sheave 9, that the sash will practically be suspended when tilted into an angular position by the cord or tape. The sash is thus not only suspended,

but it is practically balanced, so that the manipulation of the sash, both in tilting it out and pushing it back to place, can be effected with but slight exertion of force. The sash may be provided in its opposite edges with pins or studs 11, or equivalent means for guiding the lower edge of the sash vertically as its upper end is tilted out of the frame. This pin or stud will travel in a groove 12, formed in the side of the frame and which will be concealed from view when the window is in place. The position of the window when raised or tilted out so as to be in a convenient position for cleaning is indicated by the dotted lines in Fig. 2, and thus it will be seen that my invention in its simplest form is embodied in a sash suspended by a flexible cord, tape, or cable connected thereto at two points and having intermediate its ends a fixed point over which it passes. The necessity, therefore, for counterbalancing-weights in devices of this kind is entirely dispensed with and the window may be operated with very little labor.

In order to make a suitable joint to exclude the elements, either the sash-bar 13 or the stop 14 may be provided with a bead 15 and the other member with a groove 16 to receive the bead. This stop also serves as a cover to the sheave. Where the invention is applied to windows already provided with weight-boxes, as shown in Figs. 1 and 3, I may use a second deflecting sheave or pulley 17, and in such cases both the sheave 17 and the sheave 9 may be journaled upon a frame-plate 18. (Shown in detail in Fig. 5.)

In Figs. 6 and 7 I have shown a threaded stud 19, having a head 20, pivotally connected with a keeper-plate 21, to which the lower end of a metal tape 22 is secured. The pivoting of the parts 20 and 21 together permits the cord to flex as the window changes its angular position, and I prefer to make the deflecting-sheave 17 conical so as to give the tape a half-turn. This method of hanging windows may be applied to various styles of sash and will be found particularly convenient, as it enables the window to be tipped out of the frame for cleaning, avoiding the expense of sash-weights and the construction of weight-pockets.

I claim—

1. The herein-described improvement in

hanging windows, comprising a flexible sash-cord attached to the window-sash at two points on opposite sides of its mid-height and a guide fixed to the window-frame and over which
5 the body of the cord is passed, substantially as described.

2. The herein-described improvement in hanging windows, comprising a flexible sash-cord attached by its ends to the sash at separated points, a fixed guide over which the
10 body of the cord passes and a sliding connection between the sash and the frame, substantially as described.

3. The combination with a window-sash, of
15 a flexible cord or cable connected to the side bar thereof at a point above the mid-height of the sash and also at or near its lower edge,

a pulley mounted on the sash over which the body of the cord passes, a slot-and-pin connection between the sash and the frame and
20 a stop secured to the frame and having an interlocking joint with the sash, substantially as described.

4. In means for hanging windows, the combination with a metal tape, of a plate to which
25 said tape is attached and a second plate provided with a threaded shank to engage the sash and pivoted to the first-named plate, substantially as described.

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