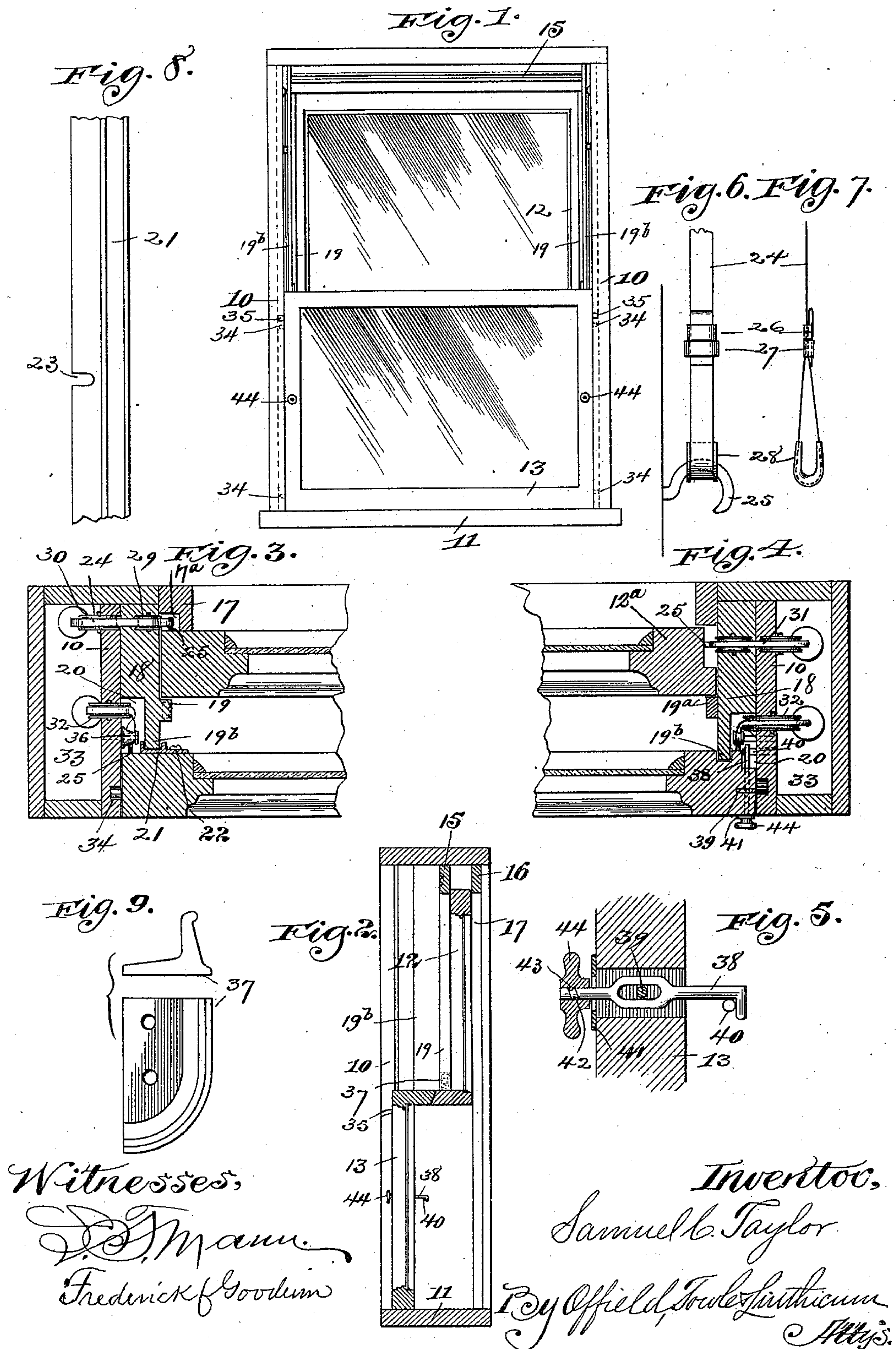


(No Model.)

S. C. TAYLOR.
WINDOW.

No. 525,168.

Patented Aug. 28, 1894.



UNITED STATES PATENT OFFICE.

SAMUEL C. TAYLOR, OF CHICAGO, ILLINOIS.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 525,168, dated August 28, 1894.

Application filed October 9, 1893. Serial No. 487,685. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL C. TAYLOR, of Chicago, Illinois, have invented certain new and useful Improvements in Windows, of which the following is a specification.

My invention relates to that class of windows in which the sash are hung upon counter-balance weights and adapted to be tipped forward out of the frame for the purpose of cleaning; and the invention may be embodied in a window having one or more sash.

In the accompanying drawings I have shown my invention as embodied in a double sash window, both of the sash being vertically movable and also capable of being tipped forward out of their ways.

My present improvements relate particularly to certain features of construction and combinations which will be hereinafter described and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation of a window frame having upper and lower sash mounted therein, the lower sash being provided as shown in dotted lines with pintles whereon it is guided and balanced in operation. Fig. 2 is a central, vertical, sectional elevation of the same. Fig. 3 is a sectional plan view showing tapes for securing the counter-balance weights to the sash and means for deflecting one of said tapes, and also showing a ribbed strip on the lower sash to receive the edge of the parting strip. Fig. 4 is a similar view of an alternative construction, showing cords for the counter-balance weights and the rear face of the stile of the lower sash plowed out to form a groove for the edge of the parting strip. Fig. 5 is a detail view of the tightening device. Figs. 6 and 7 are detail views of means for securing the tape. Fig. 8 is a broken detail view of the ribbed strip to receive the parting strip; and Fig. 9 is a detail view of a modified construction of guide for the metal tape.

In the drawings, 10 represents the jambs and 11 the sill of a window frame.

12 represents the upper sash and 13 the lower sash.

15, 16 represent moldings or stops which form a supplemental head above the sash 12.

17 represents the rear stop for the upper sash.

18 represents a parting strip which is secured to the face of the jamb and which, in the preferred construction, is plowed out on its outer face to form the shoulder 19 as shown in Fig. 3. This shoulder forms a front stop for the upper sash. The strips 18 extend from top to bottom of the frame and are interposed between the jamb and the upper sash; but the shoulder 19 terminates in the plane of the meeting rails, as indicated in Fig. 2, so that the upper sash may be tipped forwardly as hereinafter described. The front edge of the strip 18 is gained or cut away to provide the pocket 20, the remaining narrow portion or tongue 19^b being adapted to enter the groove in the ribbed strip 21, shown in detail in Fig. 8 and in section in Fig. 3. This ribbed strip is secured by the screws 22, which take into notches in the edge of the strip as seen at 23 (Fig. 8), and which permits the said strip to be adjusted by simply loosening the heads of the screws to accommodate shrinkage. The strip 18 having its front edge seated in the groove of strip 21 incloses the pocket 20, forms a guide for the lower sash and an abutment whereby it may be tightened to prevent rattling.

In Fig. 4 I have shown an alternative construction of the parting strip, consisting of a separate strip or stop piece 19^a, instead of the integral shoulder 19; and in this construction the ribbed strip 21 is omitted and the rear face of the lower sash bar is plowed out to form a groove to receive the front edge or tongue 19^b of strip 18.

The upper and lower sash each have counter-balance weights to which they are connected, preferably, by tapes 24. These tapes are thin, flexible strips of metal, usually steel, and I have shown in Figs. 6 and 7 a means for securing them to the sash. The sash may be provided with a stud or hook 25, and the steel tapes have their ends looped to engage these hooks, the free end after forming the loop being passed through a metal

keeper 26, and then the end of the tape is given a return bend and a second keeper 27 is secured over such returned end. These keepers may be made of short pieces of the tape and do not require soldering but can be sufficiently secured by simply lapping their ends by each other after passing them around the body of the tape with its returned end which forms the loop. This manner of fastening is secure and inexpensive.

In order to prevent the hook or stud 25 from chafing the metal band or breaking it under abrupt shock, I have provided a separate bearing 28, which may be cast from brass with side flanges to engage the edges of the tape which holds it in place. This bearing or stirrup is inexpensive and readily fitted in place. The tape for the upper sash will be preferably carried over the sheaves 29, 30, and the stud or hook 25 will be secured to the back of the side bars of said sash. In order to form a pocket therefor, the back stop 17 may be gained in one corner, as clearly shown in Fig. 3; but the preferred construction is shown in Fig. 4, where the edge 12^a of the sash bar is gained and a cord 31 is employed for connecting the counter-balance weight with the upper sash. 32 represents the sheave for the tape or cord for the lower sash, the edge of which sheave projects into the pocket 20 and also clears the rear face of the jamb. The weights travel in the weight pocket 33, and the lower sash is guided by the pintles 34 which travel in grooves cut in the face of the jamb near its front edge. These grooves are bisected at one point by transverse grooves 35 in order to permit the upper pintles to pass out of the groove when it is desired to tip the lower sash for cleaning. In order to guide or control the tape (when tapes are used), during this tipping forward of the sash, I have provided a guide therefor, two forms of which are shown. The preferred form is a conical sheave 36, which is rotatably mounted at right angles to the face of the jamb and which turns the tape without pulling it off the upper sheave, as seen in Fig. 3. Another form of guide may be advantageously used in some instances, said form consisting of a curved segment, shown in Fig. 9 and marked 37, and applied as shown in Fig. 2.

The locking mechanism is shown applied in Figs. 2 and 4 and in detail in Fig. 5. It comprises a latch or bolt 38, which is inserted through a transverse slot in the sash bar. The middle of this bolt is slotted and pivoted upon a pin 39. The inner end of the bolt is bent or hooked and adapted to engage pin 40 which may be set either in the face of the strip 18 or one of the projections thereof, or it may be set in the face of the jamb 10, as seen in Fig. 4. An escutcheon 41 surrounds the projecting end of the latch bolt and beyond the escutcheon said latch bolt has a spiral groove 42 which is engaged by an internal rib 43 in a thumb piece 44. By manipulating the

thumb piece the sash is drawn in tightly against the strip 18, thus making a tight joint and preventing rattling. The latch bolt may be so constructed as to form a lock by slightly hooking its end; but as the main purpose is to tighten the sash, the locking feature may be dispensed with.

In operation when it is desired to tilt the lower sash out of its ways, said sash is raised until its bottom rail clears the sill, in which position the upper pintles will come in line with the transverse slots which bisect the grooves in the jamb, and the window can thereupon be tilted forward, the lower pintles serving as pivots on which the sash tilts. The tapes will be deflected over the guiding sheaves and will restrain the sash from tipping too far forward.

In order to tilt the upper sash the lower sash is raised and then the upper sash is pulled down behind it until its upper edge clears the shoulders or front stops when the upper sash may be tipped out beneath the lower, the back stops serving to restrain it; or, if desired, the upper sash may be removed entirely as it has no pintles to prevent its withdrawal. The supplemental head formed by the moldings 15, 16 is employed in order to cover the space above the upper sash as said sash does not extend to the top of the jamb, while the lower sash can be raised to the top of the jamb so that its meeting rail will clear the top of the upper sash in withdrawing it. The use of the supplemental head obviates the necessity of employing a movable sill and is a simpler and better construction.

I do not claim in this application the novel means for securing and deflecting the tapes.

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

1. In a window, the combination with the jambs, of upper and lower sash, counter-balance weights connected respectively to the sash and strips interposed between the upper sash and the jambs, said strips being gained to provide pockets for the suspending tapes or cords and having their front edges adapted to contact with the rear sides of the lower sash bars, substantially as described.

2. In a window, the combination with the upper and lower sash thereof, of a parting strip interposed between the upper sash and the jambs and secured to the face of the jamb and extending from bottom to top thereof, said strip having its front edge gained to provide a tape or cord pocket, and a ribbed strip secured on the lower sash and adapted to receive the front edge of the parting strip, substantially as described.

3. In a window, the combination with the lower sash, of a strip secured upon the jamb and with its front edge contacting with the rear face of the lower sash bar, and a tightening device comprising a pivoted latch bolt having an end adapted to engage a fixed part

of the window and a tightening nut or thumb piece having a threaded engagement with said latch bolt, substantially as described.

4. In a window, the combination with the
5 upper and lower sash, of a parting strip secured to the face of the jamb and extending from bottom to top thereof, and a ribbed strip secured on the rear face of the lower sash bar

and adapted to receive the front edge of the parting strip, said strip having notches in its edges whereby it may be adjustably secured by nails or screws, substantially as described.

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Witnesses:

C. C. LINTHICUM,
L. F. MCCREA.