Dec. 23, 1924. 1,520,167

H. T. ATKINSON

SWINGING WINDOW

Filed Jan. 23, 1923

Fig. 1.

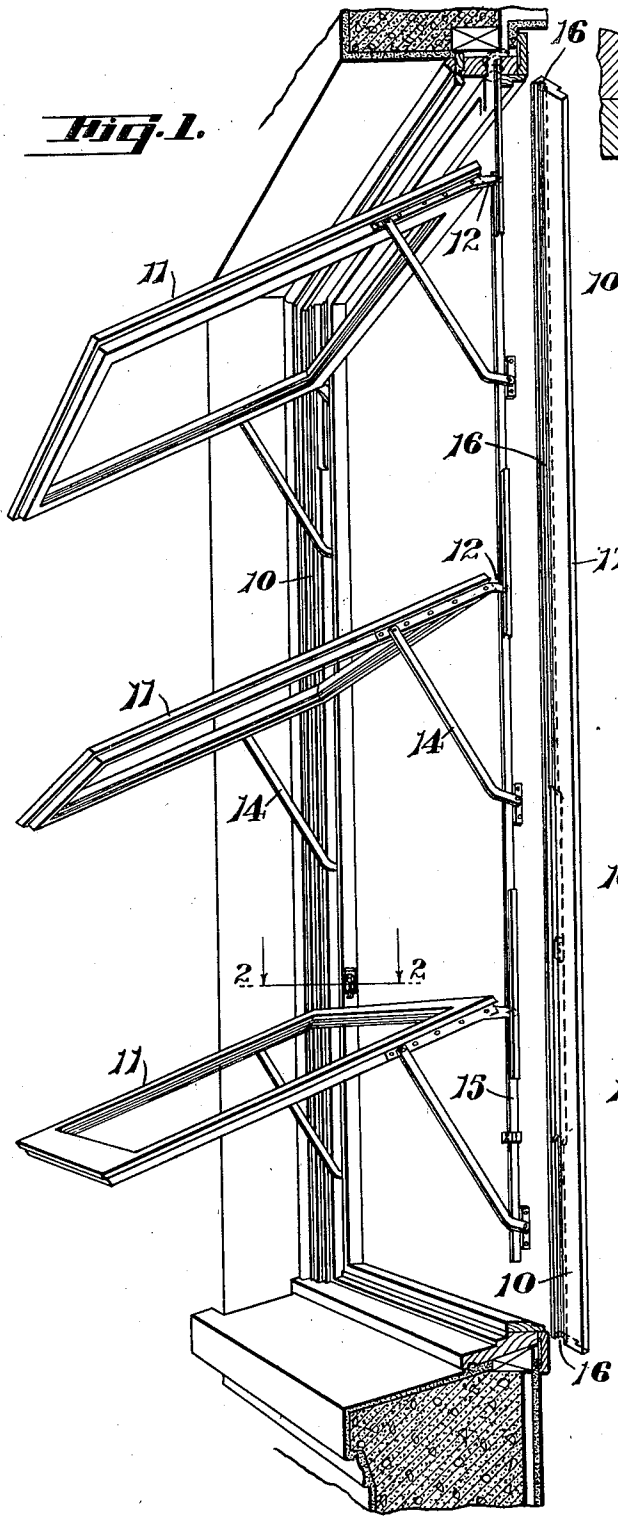


Fig. 2.

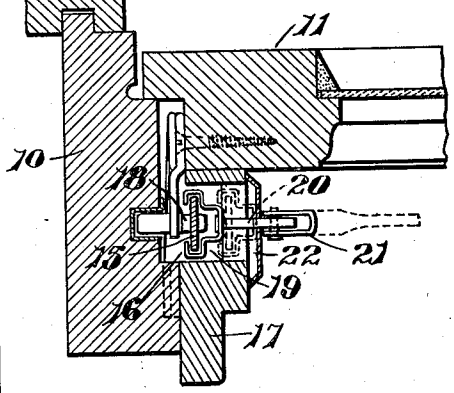


Fig. 3.

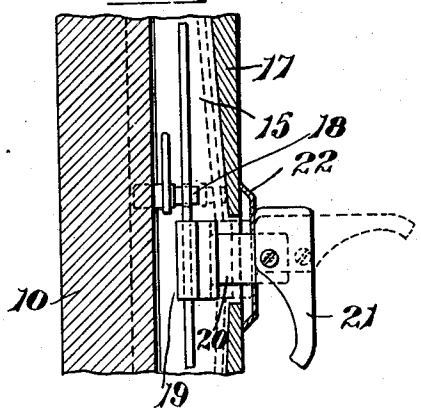
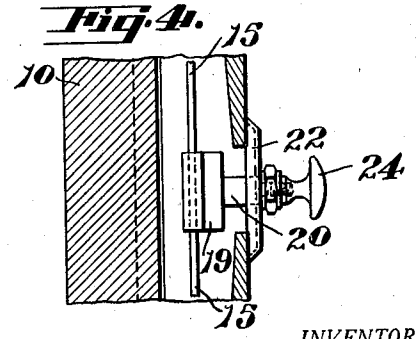


Fig. 4.



INVENTOR.
HENRY T. ATKINSON.
BY Dewey, Strong, Townsend and Soper
ATTORNEYS.

Patented Dec. 23, 1924. 1,520,167

UNITED STATES PATENT OFFICE.

HENRY T. ATKINSON, OF OAKLAND, CALIFORNIA, ASSIGNOR TO UNIVERSAL WINDOW COMPANY, OF OAKLAND, CALIFORNIA, A CORPORATION OF CALIFORNIA.

SWINGING WINDOW.

Application filed January 23, 1923. Serial No. 614,384.

To all whom it may concern:

Be it known that I, HENRY T. ATKINSON, a citizen of the United States, residing at Oakland, county of Alameda, and State of California, have invented new and useful Improvements in Swinging Windows, of which the following is a specification.

This invention relates to swinging windows.

In my Patent No. 1,431,619, issued October 10th, 1922, I show a plurality of swinging sashes having trunnions slidably mounted in guides on the frame. Each sash is pivotally mounted on a pair of swinging links connected with the frame and a traveling bar or link connects the sashes together, so that they operate in unison.

The present invention has for its object to provide mechanism which will permit any one of the sashes to be positioned differently from the others, the preferred method of doing this being by means of a clutch or releasable connection between the sash and the traveling bar.

One form which my invention may assume is exemplified in the following description and illustrated in the accompanying drawings, in which—

Fig. 1 shows a perspective view of a window embodying my invention with one of the jambs moved out of normal position.

Fig. 2 shows a horizontal sectional view taken on the line 2—2 of Fig. 1.

Fig. 3 shows a vertical sectional view through one side of the frame.

Fig. 4 shows a modification of the device illustrated in Fig. 3.

The window includes a frame 10 and a plurality of swinging sashes 11, each having a pair of trunnions 12 sildably fitted in grooves 13 formed in the frame. A pair of fulcrum links 14 is pivotally connected intermediate the ends of each sash and to the sides of the frame. The trunnions of adjacent sashes are connected together by a traveling bar 15 which slides up and down in a groove 16 formed in a stop or weather strip 17.

Therefore, when one window is moved the others move in unison therewith, and, in order to permit one window to occupy a different position from the others, I provide a clutch or releasable connection between the said traveling bars and the trunnions. Such a connection includes a pin 18 on each trunnion extending loosely into an opening in the respective bar 15. The groove which receives the bar is enlarged adjacent the connection 18 and slidably received on the bar is a clip 19 which has a stem 20 extending through an opening in the stop or weather strip 17.

As shown in Fig. 2 the stem has a lever 21 to engage an escutcheon plate 22 on the stop and exert an outward pull on the traveling bar when the lever is manipulated. In place of the lever 21 the stem may be provided with a button or nut 24 to be engaged by the hand for pulling the bar outwardly, as shown in Fig. 4. The bar is thus pulled outwardly far enough to disconnect it from the pin 18 so that one sash can be operated independently of the other.

In the operation of the present mechanism it is possible by means of these clutches to bring about any combination of openings for the three sashes. For instance, when all three sashes are opened, the two upper ones may be left open while the bottom one is closed by manipulation of the levers 21, or the bottom sash may be opened and the two upper ones closed. In fact, any desired relative arrangement of the sashes may be obtained by the present clutch mechanism.

In some instances the trunnion pin on the left-hand side of the middle sash may be omitted and the lower and middle sashes may be connected together on their right-hand side, whereas the top and bottom sashes will be connected together on the left-hand side. Thereby the top sash may be left open and the two bottom sashes closed.

Another advantage of the present clutch mechanism is that it may be used as a brake to hold the windows open against wind. This is done by raising the lever to disconnect the traveling bar from the pins on the trunnions, whereupon the traveling bar is frictionally held against movement by engagement with the window stop.

It will be understood that the present clutch mechanism may be used on two or any other number of sashes.

Various changes in the construction and arrangement of the several parts herein

shown and described may be employed without departing from the spirit of my invention as disclosed in the appended claims.

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

1. In a window structure, the combination with a frame and a plurality of sashes pivotally and slidably mounted therein of a traveling bar arranged beneath a window stop and connecting said sashes together and means extending through said stop and operable from the exterior thereof to disconnect the bar from one of said sashes.

2. In a window structure, the combination with a frame, a plurality of sashes pivotally and slidably mounted therein, a window stop formed with a groove on its inner face, a traveling bar vertically movable in said groove, a clip through which the bar is slidable, said bar being detachably connected with one of the sashes and means on said clip extending through the stop for pulling the bar outwardly to disconnect it from the sash.

3. In a window structure, the combination with a frame, a plurality of sashes pivotally and slidably mounted therein, a window stop formed with a groove on its inner face, a traveling bar vertically movable in said groove, a clip through which the bar is slidable, said bar being detachably connected with one of the sashes, a stem on the clip extending through the stop and a lever on the stem for engagement with the stop to exert an outward pull on the bar whereby to disconnect the latter from the sash.

4. In a window structure, the combination with a frame of a plurality of sashes pivotally and slidably mounted therein, a window stop formed with a groove therein, a bar connected with the said sashes and vertically movable in the groove, a clip through which the bar is slidable and a stem on the clip extending through an opening in the stop whereby the bar may be drawn into frictional contact with the stop for the purpose of affording a braking action to maintain the sashes in adjusted position.

HENRY T. ATKINSON.