A. C. TAYLOR.

WINDOW.

APPLICATION FILED JAN. 20, 1916.

**1,226,145.**

Patented May 15, 1917.

2 SHEETS—SHEET 1.

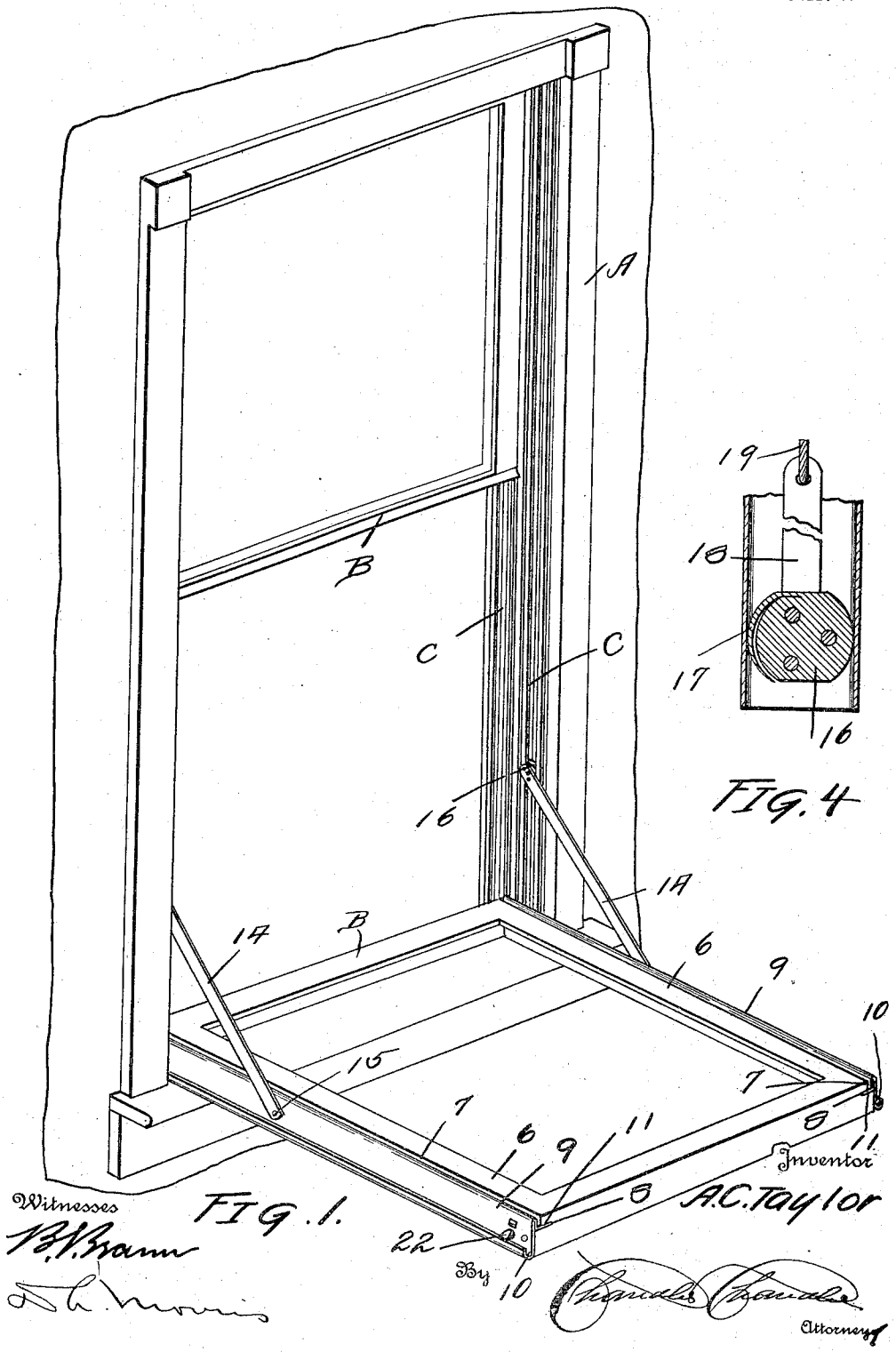



FIG. 4

FIG. 1.

Witnesses

B. V. Brann

Inventor

A. C. Taylor

By

Attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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2 SHEETS—SHEET 2.

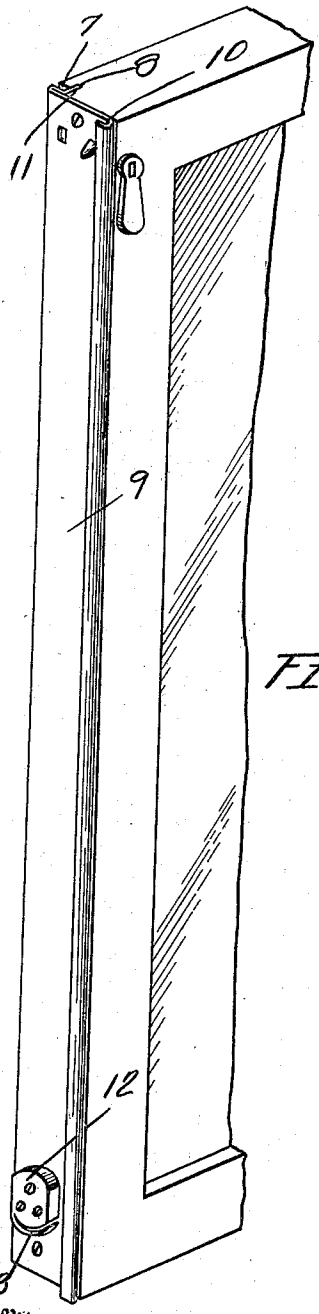



FIG. 2.

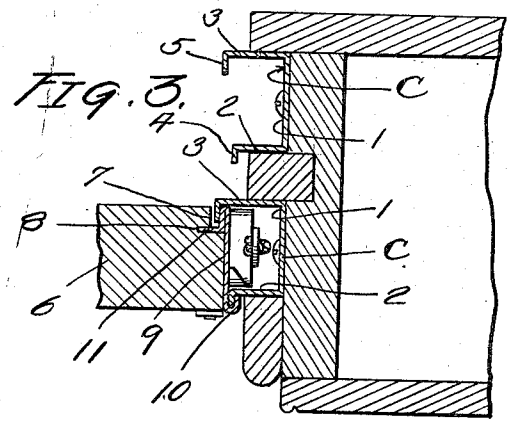



FIG. 3.

Witnesses

Inventor

A. C. Taylor

By

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

AIKEN C. TAYLOR, OF RICHMOND, VIRGINIA, ASSIGNOR TO EMANUEL P. SUMMERFIELD, OF NORFOLK, VIRGINIA.

## WINDOW.

1,226,145. Specification of Letters Patent. Patented May 15, 1917.

Application filed January 20, 1916. Serial No. 73,194.

*To all whom it may concern:*

Be it known that I, AIKEN C. TAYLOR, a citizen of the United States, residing at Richmond, in the county of Henrico, State of Virginia, have invented certain new and useful Improvements in Windows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to that class of windows wherein a sash is adapted to be swung to a tilted position from its normal closed, that is to say, its vertical position for the purpose of regulating ventilation and to permit the cleaning of the glass pane with safety and facility and is in the nature of an improvement upon the window forming the subject matter of my Patent Number 1,171,367, issued February 8, 1916.

While my invention is based upon the same general principles as the structure of the above named application, it differs therefrom in certain respects so as to present material advantages over the said structure of the application. For instance, instead of employing a guide strip which is provided with an inside or resilient flange, I use a rigid channeled guide strip which provides ample space for a cam having a resilient cam finger, in the pivot of the follower, the provision of such a cam insuring a better gripping action against the sides of the channel.

In the accompanying drawings:

Figure 1 is a perspective view of a window embodying my invention, the lower sash being swung inwardly to a horizontal position and the upper sash being shown in a vertical position;

Fig. 2 is a detail perspective view of one side of the sash and showing the sash strip, the follower cam and the pivot cam;

Fig. 3 is a cross sectional view taken through one side of the sash and window frame showing the sash in its vertical or closed position with the latching pin holding the sash in such position;

Fig. 4 is an enlarged detail of the cam showing its position in the channeled guide strip when the sash is in one of its tilted positions.

Referring to the drawing by reference characters wherein like parts are indicated by like characters throughout the several views:

For the sake of brevity I will describe the invention as applied to the lower sash but it is to be understood of course that it is applicable to the upper sash as well.

Referring now to the accompanying drawing in detail, the window frame is indicated by the letter A and the upper and lower sashes by the letter B. I provide, at each side of the window frame A, a longitudinally extending metallic guide strip which is indicated as an entirety by the letter C. This strip is constructed of a single piece of metal which is bent longitudinally to form a flat base 1 which is secured to the window frame by any suitable means. Extending from this base 1 are front and rear walls 2 and 3 respectively, the inner wall being termed the front wall and the outer wall, the rear wall. These walls 2 and 3 and the base 1 present smooth unbroken surfaces to form a channel while the walls are provided with flanges 4 and 5 which extend at right angles to the walls in the same direction, the wall 3 is of greater width than the wall 2 as clearly illustrated in Fig. 3 of the drawing for a purpose which will later become apparent. The window sash B includes usual side bars 6 and each of these side bars is rabbeted as at 7 and is provided with a longitudinally extending slot 8 at the inner end of the rabbeted portion. Secured to the outer side of each of the side bars 6 is a strip 9 which is secured to the side bar by suitable fasteners and which will hereinafter be designated as the sash strip. This strip is of equal width to that of the side bar of the sash and a portion thereof overlies the rabbeted portion of the guide bar to form a channel as clearly illustrated in Fig. 3 of the drawing. This strip is bent to form a channel 10, at its rear edge, which channel extends longitudinally of the strip and the strip is bent back upon itself to form a lip 11 which extends into the slot 8 in the side bar.

Secured to the lower end of each sash strip 9 is a pivot cam 12 which is rigid with the strip and which extends into the channel of the adjacent guide strip. The body portion of each of these cams is substantially circular in formation but extending from this body portion is a resilient

cam finger 13 which is integral with the body portion and is eccentrically arranged with respect thereto. It is to be noted that when the sash is in its vertical position the finger 13 is disposed below the body portion of the cam 12 but when the sash is swung to an inclined position the finger will bind against the wall 2 and thus assist in maintaining the sash in its inclined position. Thus it will be seen that the sash may be moved pivotally to an inclined position or slidably when it is in a vertical position owing to the construction and arrangement of the cams 12 within the guide strips.

Pivotally mounted on each of the sash strips is a link 14, the pivot points being at 15. These links extend upwardly and mounted on the upper ends thereof are cams 16 which are similar in construction to the cams 12 and which will hereinafter be designated as follower cams. These cams 16 slide in the channels of the guide strips in a manner similar to that in which the cams 12 slide therein and when the window sash is moved pivotally about the cams 12, the fingers 17 of the cams 16 will be forced against one wall 3 of the guide strips so as to assist in binding the sash in its tilted position. Secured to each of these cams 16 is a link 18 to which the sash cord 19 is attached, which cord is trained over pulleys in the usual manner. Now when the sash is in its closed, that is to say its vertical position, the edge of the flange 5 will engage the adjacent face of the lip 11 and the inner face of the flange will engage the adjacent face of the sash strip so that an absolutely weather-tight joint is provided. Furthermore in connection with this lip 11, it is pointed out that the extension of this lip into the slot 8 prevents or tends to prevent the warping of the sash at right angles to the plane thereof. When the sash is in its vertical position, the flange 4 extends into the channel 10. Thus the sash may be either raised or lowered as desired.

It will thus be seen that I have provided cams on which the sash is pivoted, which cams are slidable in the guide strips and which bear against the walls thereof when the sash is swung into an inclined position to maintain the sash in such position. Furthermore I have provided links which are pivotally connected to the sash at points between its ends and which are provided with cams which likewise operate in the guide strips and bind thereagainst when the sash is tilted in an inclined position.

It will be noted that by having the engaging faces of each cam in resilient relation to each other, all of the cams will operate to wedge in the guides, which would not necessarily occur if the cams were not resilient, as when the guide channels might have their walls unparallel.

What I claim is:—

1. The combination with a window frame, of channeled guide strips located at the sides thereof, a vertically sliding window sash, and pivot cams secured to the lower ends of the sash and movable in the channels of said strips, the said cams having body portions substantially circular in formation and resilient fingers integral with the body portions and eccentric to the centers thereof, the said fingers being adapted to bind against the walls of the guide strips when the sash is swung to an inclined position.

2. The combination with a window frame having guide channels, of a sash mounted in the frame and having cams slidably and rotatably engaging the corresponding guides and of such dimensions as to insure movement of them into and out of contact with the sides of the channels, the contacting faces of the cams being in resilient relation to each other for yielding engagement with the sides of the channel.

3. The combination with a window frame having guides, of a sash mounted in the frame, cams carried by the sash in guiding relation to the guides and upon which the sash is slidable and rotatable with respect to the guides, links connected with the sash and having cams similar to the first named cams and in similar relation to the guides, the cams being movable into locking engagement with the guides when the sash is swung pivotally, said cams being constructed for resilient engagement with the guides, whereby engagement of all cams is insured.

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

AIKEN C. TAYLOR.

Witnesses:
L. P. FORD,
J. H. GORDON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."