No. 676,529. Patented June 18, 1901.

H. K. BROWNING & M. J. DALY.

WINDOW.

(Application filed Mar. 6, 1900.)

(No Model.) 2 Sheets—Sheet 1.

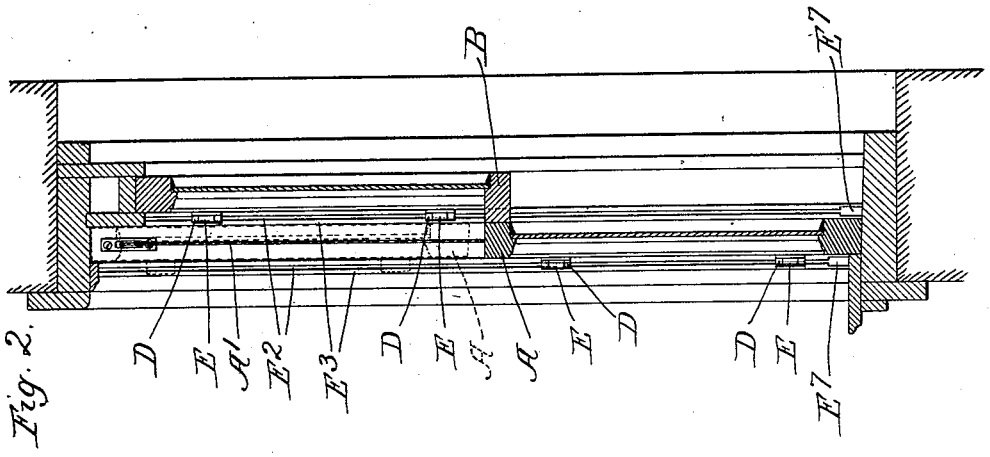

Fig. 2.

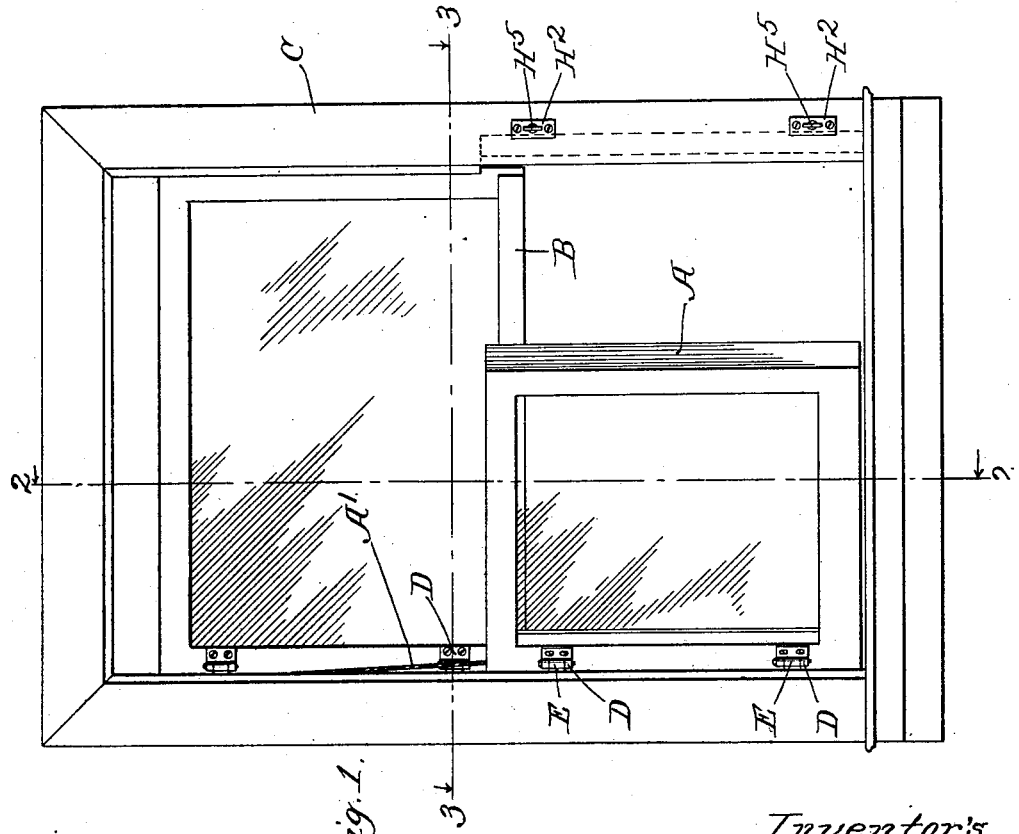

Fig. 1.

Witnesses,
Edward T. Wray.
Howard C. Kraft

Inventor's.
Hugh K. Browning
& Michael J. Daly.
by Parker & Carter.
their Attys.

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Fig. 3.

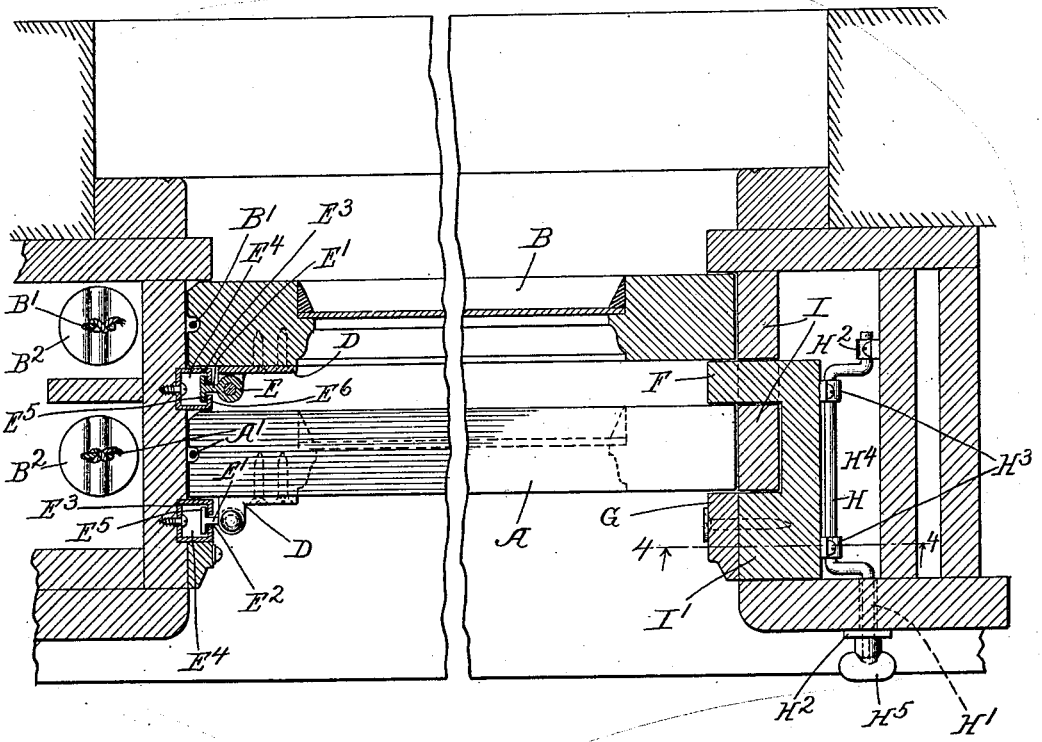


Fig. 4.

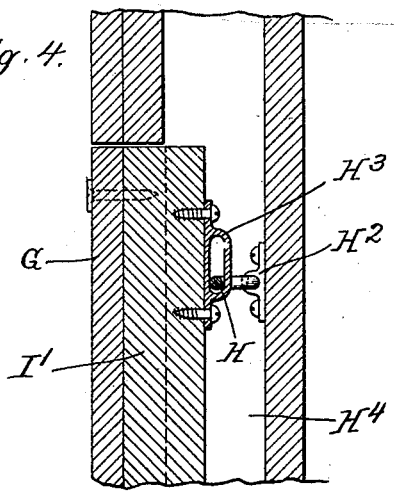
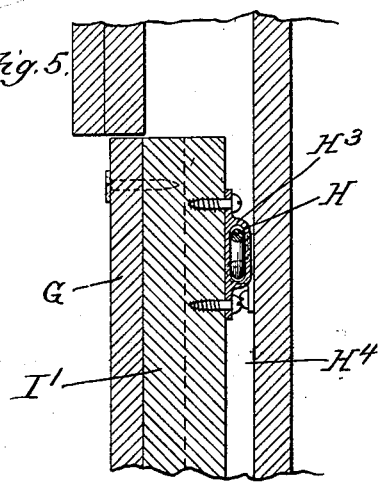


Fig. 5.



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their Atty's.

UNITED STATES PATENT OFFICE.

HUGH K. BROWNING AND MICHAEL J. DALY, OF CHICAGO, ILLINOIS.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 676,529, dated June 18, 1901.

Application filed March 6, 1900. Serial No. 7,452. (No model.)

To all whom it may concern:

Be it known that we, HUGH K. BROWNING and MICHAEL J. DALY, citizens 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.

Our invention relates to improvements in windows and the like, and has for its object to provide a new and improved construction of this description.

Our invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a view of a window embodying our invention. Fig. 2 is a section on line 2 2, Fig. 1. Fig. 3 is a section on line 3 3, Fig. 1, the two sashes of the window being closed. Fig. 4 is a section on line 4 4, Fig. 3, with the guide-pieces in their normal position. Fig. 5 is a view similar to Fig. 4 with the guide-pieces retracted.

Like letters refer to like parts throughout the several figures.

One of the objects of our invention is to provide a window or the like so constructed that both the inner and outer faces are easily accessible from within the building for cleaning and the like. In the ordinary window it is necessary to clean the outer surface of the window from the outside, while with our construction this difficulty is obviated and both sides of both sashes when two sashes are used can be easily and quickly cleaned from the inside.

Referring now to the drawings, we have shown an ordinary window provided with two sliding sashes A and B, mounted in a suitable frame C. These sashes are mounted between suitable guide-pieces, as is ordinarily the case. These sashes are preferably provided on one side with suitable hinges. These hinges may be constructed in any desired manner and are preferably formed of two pieces D and E. The pieces D are fastened to the sides of the window-sash. The pieces E are provided with projecting parts E′, which work in slots or the like E^2 in the parts E^3, associated with the window-frame. These parts E^3 may act as guides or holding-pieces which hold the window-sash in place and between which the window-sash slides. It is of course evident that any desired construction for this purpose may be used, and we have only attempted to show a simple and convenient construction. In the construction shown, for example, in Fig. 3 the parts E^3 are shown as hollow, having an open space E^4 extending longitudinally therealong. The piece E is provided at its end with an enlargement E^5, which is larger than the slot E^2, so that when the parts are assembled the pieces E of the hinges will be held in place, but free to slide up and down along the slots E^2. Some suitable means is provided for inserting the enlargements E^5 in the parts E^3. This may be done by cutting away the inner face E^6 of said parts—as, for example, at E^7, Fig. 2. The parts E^3 are preferably made of iron, although it is of course evident that wood or any other material may be used. The sashes A and B are provided on their hinged sides with suitable cords and weights in the ordinary manner, the cords A′ B′ being connected to the weights A^2 B^2, which move in a suitable hollow in the frame, as is customary in such cases. At the other side of the frame the guide-pieces between which the lower sash is confined are made movable, so that they may be easily retracted to free the lower sash and permit it to swing inwardly on its hinges, as shown in Fig. 1. This result may be obtained in any desired manner. We have shown one simple and efficient means or retracting device for accomplishing this result. In this construction we have connected the guide-pieces F and G together (see Fig. 3) and provided a device for moving them inwardly past the edge of the sash, so as to free said sash. It is of course evident that it is only necessary to have these guide-pieces movable for a length substantially equal to the height of the lower sash, thus permitting a movement of a sufficient length of these guide-pieces to free the sash. Any suitable means may be used for moving the guide-pieces. As here shown, we have provided a crank H, having one end H′ mounted in the side of the frame and the other end mounted in a suitable bearing H^2, attached to some fixed part. This crank is connected with the guide-pieces F and G by means of the devices H^3. A suitable space H^4 is provided to permit a sufficient movement of the parts to free the sash. We prefer to provide a thumb-piece H^5, by means of which the crank

is rotated. In Fig. 1 we have shown two cranks, one near the bottom and one near the top of the lower sash. This construction, while not necessary, permits the entire length of the guide-pieces to be easily and quickly retracted and forms a very convenient arrangement. The guide-pieces F and G may be made in one continuous U-shaped piece, if desired, or they may be made in separate pieces and fastened together.

As shown in Fig. 3, the side piece I of the frame is slotted for a distance equal to or some greater than the height of the lower sash, and the guide-piece F projects through this slot. We have shown the guide-piece G as being attached to the piece I', as this construction permits the guide-piece G to be given any desired shape in order to conform to the decorations of the room in which the window is located. As shown in Fig. 2, the guideways in which the lower sash moves project somewhat beyond the upper edge of the upper sash when in its normal position, so that when the lower sash is lifted upwardly, as shown in dotted lines, its lower edge will be above the upper edge of the upper sash when said latter sash is at the bottom of the window, thus permitting the upper sash when at the bottom to be swung inwardly on its hinges without engaging the lower sash.

The use and operation of our invention are as follows: A window provided with our invention normally differs in no particular from an ordinary window. The upper and lower sashes may be moved up or down, as in an ordinary window, and are held in any position by means of weights. During this movement the pieces E of the hinges are free to slide up and down in the slots E^2, and the parts are adjusted so as to permit an easy and proper movement. We have found in practice that entire satisfaction is obtained by having the cords at one side of the window only. If now it is desired to wash the outer face of the window, the lower sash is moved to its lower position, and the guide-pieces are then retracted by taking hold of the thumb piece or pieces H^5 and moving them, so as to rotate the crank or cranks. When the guide-pieces F and G move inwardly past the edge of the sash, the sash may be swung inwardly on its hinges, as shown in Fig. 1, and the outer face cleaned with perfect ease and safety. When the lower sash is cleaned, it is moved back upon its hinges to its proper position and is then moved upwardly to the position shown in dotted lines in Fig. 2. The upper sash is then moved downwardly and is in turn swung inwardly on its hinges, so that its outer face may be cleaned. After the upper sash is cleaned it is swung back upon its hinges and moved to its proper position. When the guide-pieces F and G are moved outwardly by means of the thumb piece or pieces H^5, the window is in its normal position and the sashes are held in their proper place.

It will thus be seen that we have here a simple and efficient construction, which permits the outer face of the window to be easily, quickly, and safely cleaned, and that the mechanism by which this is accomplished is simple, durable, and efficient and can be supplied to the window at very little cost.

The pieces F and G, shaped and projecting as they do, we have called "guide-pieces;" but they are combined together to produce a single guide-piece, which is in effect U-shaped, and we have so alluded to this construction in the claim.

We claim—

A window, comprising two sliding sashes, each provided at one side with a suitable cord and weight, a hollow slotted guide-piece associated with each of said sashes, a hinge attached to each sash at the side near the hollow guide-piece, each hinge provided with a projecting sliding part which extends into the associated hollow guide-piece through the slot, so as to permit the sashes to slide up and down, a movable U-shaped guide-piece at the opposite side of the window-frame, said guide-piece being equal or greater in length than the height of either sash, a fixed frame portion opposite the window-sash and between the arms of said U-shaped piece, a crank attached to said movable guide-piece and adapted when operated to retract it and free the sash confined between said guide-pieces, so that it may be moved inwardly on its hinges, the guideways in which one of the sashes moves being longer than twice the height of said sash, so that said sash may be moved to a position where it will be entirely free from the other sash, when said latter sash is opposite said movable guide-piece.

HUGH K. BROWNING.
MICHAEL J. DALY.

Witnesses:
DONALD M. CARTER,
HOMER L. KRAFT.