No. 895,402. PATENTED AUG. 4, 1908.

W. HILL.

WINDOW.

APPLICATION FILED JUNE 3, 1907.

3 SHEETS—SHEET 1.

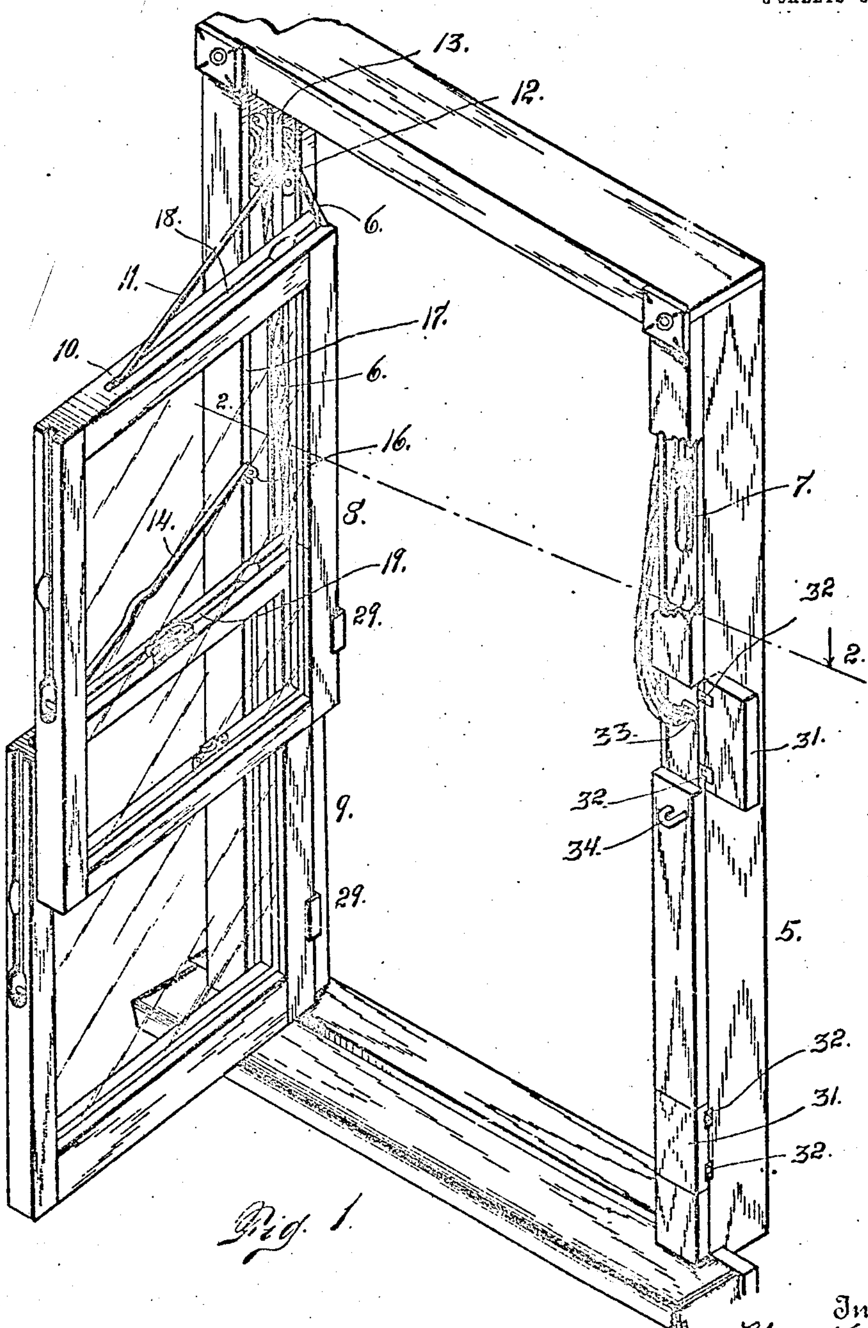

Fig. 1.

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Otto E. Hoddick.
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By [signature] Attorney

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3 SHEETS—SHEET 2.

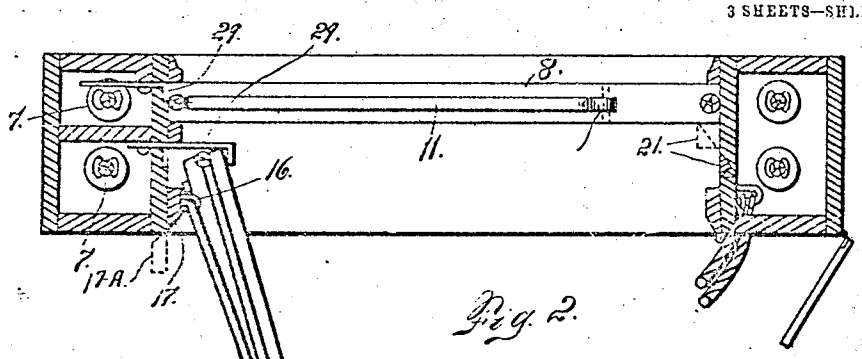
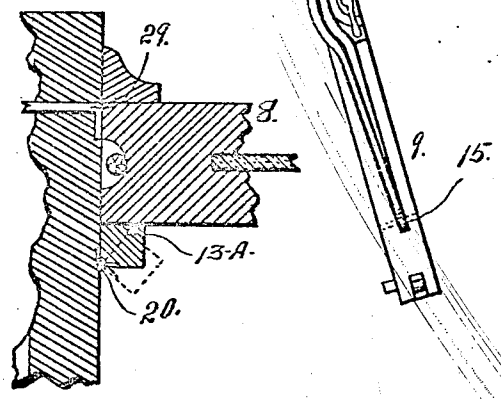


Fig. 2.



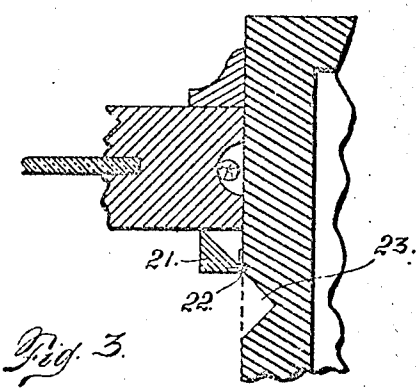
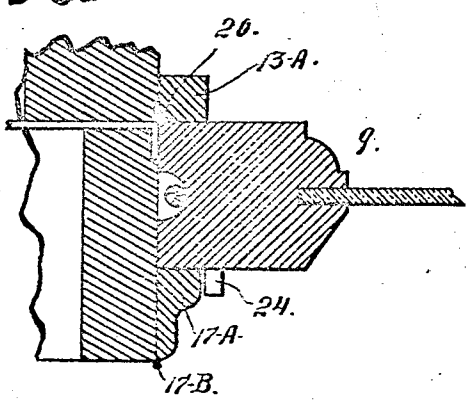


Fig. 3.



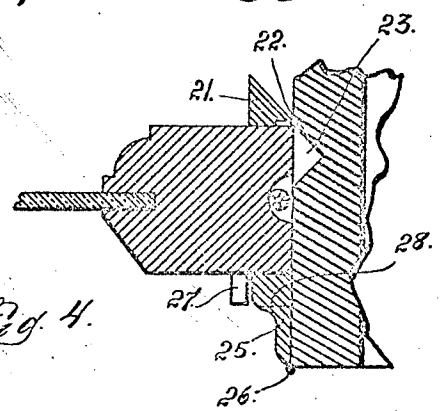


Fig. 4.

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3 SHEETS—SHEET 3.

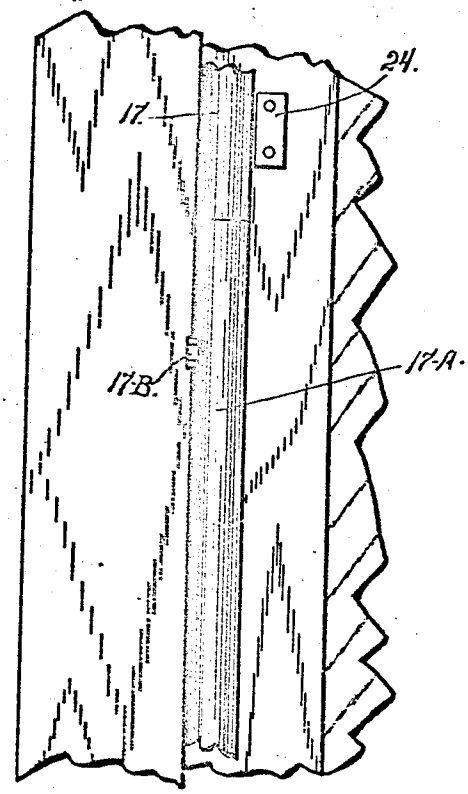

Fig. 5.

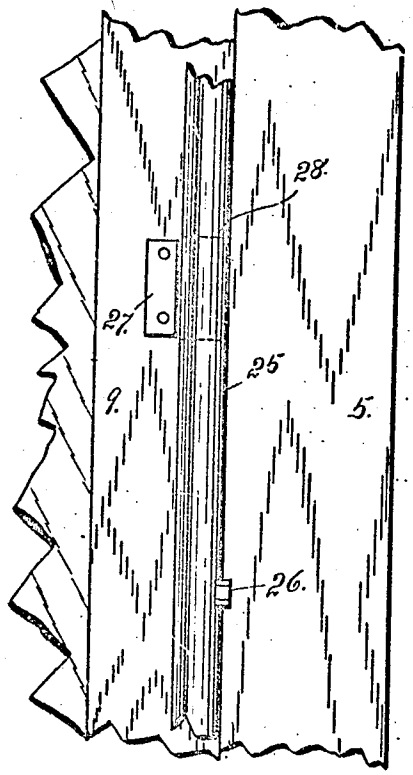

Fig. 6.

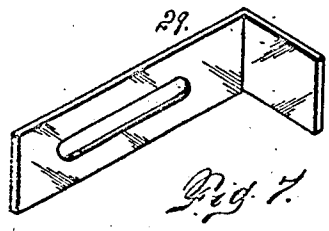

Fig. 7.

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UNITED STATES PATENT OFFICE.

WILLIAM HILL, OF DENVER, COLORADO.

WINDOW.

No. 893,402. Specification of Letters Patent. Patented Aug. 4, 1908.

Application filed June 3, 1907. Serial No. 377,029.

To all whom it may concern:

Be it known that I, WILLIAM HILL, a citizen of the United States, residing at the city and county of Denver, and State of Colorado, have invented certain new and useful Improvements in Windows; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in windows, my object being to provide a window of such construction that the sashes thereof may be swung into the room to permit the washing of the glass on the outside. In my improved construction the stops and parting beads are hinged to permit the necessary adjustment of the sashes, and each sash is provided at the top with a rod pivotally connected with the sash at one extremity while its opposite extremity is provided with a hook adapted to engage a screw-eye or other suitable device conveniently attached to the frame, whereby the sash is supported at the top and allowed to swing. I further provide an adjustable abutment adapted to engage the lower end of the sash, whereby the latter is held in place while the sash swings upon the said rod. The vertical rails of the lower sash are provided with lugs which prevent the hinged stops from moving outwardly, except when the sash is raised sufficiently for the purpose. It is not necessary to hinge the parting strips their entire length, since the upper portions of these strips may be left rigid so that the upper sash cannot be swung outwardly until it is lowered below the stationary parting strip members.

Having briefly outlined my improved construction, I will proceed to describe the same in detail reference being made to the accompanying drawing in which is illustrated an embodiment thereof.

In this drawing, Figure 1 is a perspective view of a window provided with my improvements, the two sashes being swung outwardly to illustrate my improved construction. Fig. 2 is a cross section taken on the line 2—2 Fig. 1, showing the lower sash swung outwardly and the other sash lowered so that in looking downwardly it is seen in end view. Fig. 3 is a section shown on a larger scale taken through the frame and cutting the upper sash. Fig. 4 is a similar section cutting the lower sash. Fig. 5 is a fragmentary detail view showing one side of the window and illustrating the construction of the window stop on the hinging side of the window. Fig. 6 is a similar view of the opposite side of the window. Fig. 7 is a perspective view in detail of the adjustable abutment.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate a box window frame provided with the usual sash cords 6 and weights 7. Let the numeral 8 designate the upper sash and 9 the lower sash. To the top of the upper sash is hinged at 10, one extremity of a rod 11 whose opposite extremity is provided with a hook adapted to engage a screw-eye or staple 12 attached to the stationary parting strip member 13 located at the upper part of the frame. The lower sash is provided with a similar rod 14 hinged to the sash as shown at 15, its opposite extremity being provided with a hook adapted to enter a screw-eye or staple 16, attached to the upper stationary member 17 of the stop on the hinging side of the window frame. The top rail of the upper sash is provided with a recess 18 adapted to receive the rod 11 when the sash occupies its normal position in the window frame; while the top rail of the lower sash is provided with a similar recess 19 adapted to receive the rod 14. A portion 13^A of the parting strip on the hinging side of the window, is hinged as shown at 20, to allow the upper sash to swing outwardly when moved downwardly to the position shown in Fig. 1. The parting strip on the opposite side of the window is designated 21 being of triangular shape and hinged as shown at 22 whereby it is adapted to swing into a recess 23 formed in the frame when the upper sash is swung outwardly for washing purposes. The lower portion 17^A of the stop on the hinging side of the window is hinged as shown at 17^B, whereby it is free to swing outwardly when the lower sash is properly adjusted. This sash, however, is provided with a lug 24, which prevents the hinged member from swinging outwardly, until the lower sash is raised above the top of the said member. The stop on the opposite side of the frame is designated 25 and is hinged at 26, to swing outwardly, to allow both sashes to swing to the washing position. This sash

is also provided with a lug 27 adapted to lock the hinged stop 25 from swinging on its hinge, until the said sash is raised to such a position, that the lug 27 registers with a recess 28 formed in the stop. When this occurs the stop may be swung upon its hinge to allow the sash to swing to the position shown in Fig. 1. The recess 28 is indicated by the dotted lines in Figs. 4 and 6. The two stop members 17 and 17A are shown in Fig. 5, also the position of the sash whereby the lug 24 is in such a position that the stop member 17A may be swung outwardly on its hinge. In Fig. 6 the lug 27 is shown in position to register with the recess 28 of the stop 25, whereby the said stop may be swung outwardly on its hinge 26.

The window frame is provided with two slidable abutments 29. One of the abutments 29 is used in connection with the upper sash while the other is used in connection with the lower sash when the sash is swung to the position shown in Fig. 1. Each of these abutments has its outer extremity bent at right angles to the body of the abutment forming a sort of hook, adapted to engage the lower part of the sash and hold the latter in suitable operative position, while the sash swings upon the rod 9 or 14 as the case may be. When the window sashes are in their normal position within the frame, these abutments slide into the recesses for the weights in the frame and are completely concealed, their hook-shaped extremities being sunk into the shallow recesses formed in the frame as shown in Figs. 2, 3 and 4.

Two small doors 31 are cut out of the frame in front and hinged as shown at 32. Within the frame opposite the upper door is located a hook 32 to which the extremities of the cords 6 may be attached after detaching them from the sash on the side of the frame opposite the hinging side. An exposed hook 34 may also be used for the same purpose if desired. The lower door 31, may be used for the purpose of gaining access to the lower part of the frame when for any reason such access may be necessary.

From the foregoing description the use and operation of my improved window will be readily understood. Assuming that both sashes are in their normal position in the window frame, and also assuming that it is desired to swing the sashes inwardly into the room for washing purposes, the lower sash is first raised, to bring its lug 27 into alinement with the recess 28 of the hinged stop 25 after which, the said stop may be swung inwardly to release both sash on the side of the frame opposite the hinging side. The lower sash is then raised still farther until its lug 24 on the hinging side is brought to a position above the top of the hinged stop member 17A. This member is then free to turn inwardly on its hinge 17B. The sash is then lowered until the top of the lower sash 9, is below the stationary stop member 17 This will also bring the lug 24 below the members 17. The lower sash is then swung into the room to the position shown in Fig. 1, and its rod 14 raised out of the recess 19 and connected with the hook 16, thus supporting the sash in position to permit the cleaning of the glass. The corresponding abutment 29, is then drawn outwardly to the position shown in Figs. 1 and 2, whereby it supports the lower extremity of the sash in the proper position corresponding with the support for the upper extremity thereof. The upper sash is then lowered until its top is below the stationary parting strip member 13. The upper portion of the parting strip 21 may be stationary to correspond with the stationary part 13. When the upper sash is in this position, the hinged parting strip member 21 is turned inwardly into the recess 23, after which the upper sash may be swung inwardly to the position shown in Fig. 1, the parting strip member 13A moving automatically inwardly therewith. The supporting rod 9 is then lifted from its recess 18 and connected with the device 12. The corresponding abutment 29 is also drawn outwardly to the position shown in Fig. 1 whereby the sash is supported in position for washing. After the glass has been cleaned, the sashes may be returned to their normal position by reversing the operation heretofore described.

Having thus described my invention, what I claim is:

1. In a window, the combination with the frame and sashes, the frame being provided with movable stops and parting strips, the upper rails of the sashes being provided with rods normally concealed in grooves formed in said rails, these rods being hinged at one extremity to the said rails, while their opposite extremities are fashioned to connect with the frame for the purpose of suspending the sashes, and hook-shaped abutments slidable in the frame adjacent the hinging stiles of the sashes and normally concealed thereby, these abutments being arranged to be drawn out to engage the lower portions of the sashes after the latter are swung inwardly for cleaning purposes, thus coöperating with the supporting rods to retain the sashes in position for the aforesaid purpose.

2. In a window, the combination with a frame and the upper and lower sashes thereof each sash being provided with a suspension rod connected with its upper rail and normally concealed in a groove formed therein, one extremity of the rod being pivoted to the said rail, and the opposite extremity being hook-shaped whereby it is adapted to engage an eye with which the frame is provided, the frame being also provided with horizontally disposed movable hook-shaped abutments which are normally concealed by the stiles of

the sashes on the hinging side, the said abutments being adapted to be drawn out to engage the lower portions of the sashes when the latter are swung inwardly, thus coöperating with the suspension rods to hold the sashes in position for cleaning purposes.

3. In a window, the combination with the window frame and the lower sash thereof, of hinged stops applied to the frame, the sash being provided with lugs normally engaging the stops to prevent their turning outwardly on their hinges, the stop on one side being provided with a recess of sufficient size to correspond with the lug of the adjacent stile of the sash, while the opposite hinged stop, extends only part of the height of the frame, there being a fixed stop for the rest of the height, and the lower sash being capable of upward movement sufficiently to disengage its lug from the hinged top member, substantially as described.

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

WILLIAM HILL.

Witnesses:
DENA NELSON,
A. J. O'BRIEN.