

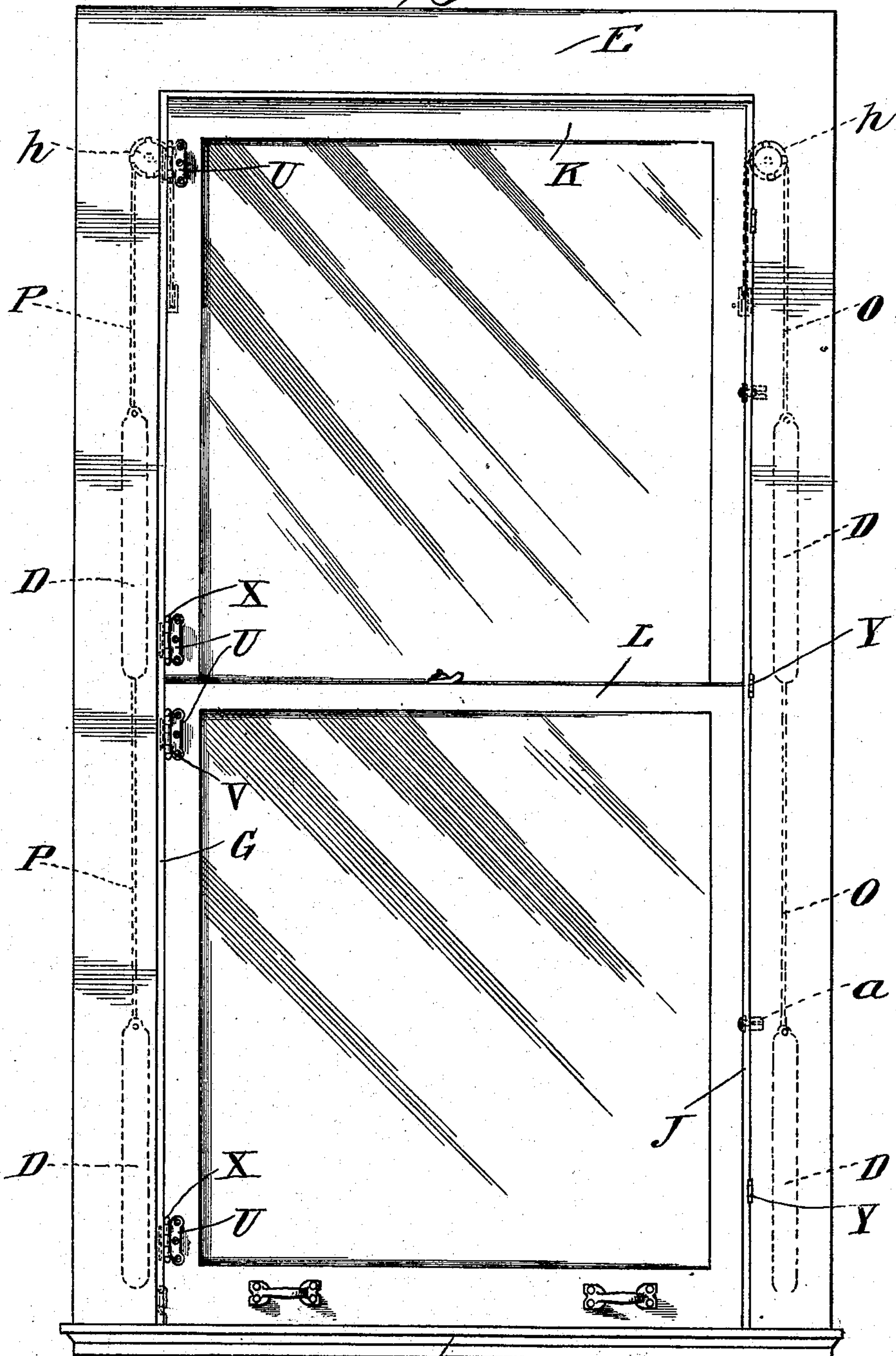
B. HAUSMANN.  
SLIDABLE AND SWINGING WINDOW SASH.  
APPLICATION FILED JAN. 28, 1907.

899,731.

Patented Sept. 29, 1908.

3 SHEETS—SHEET 1.

Fig. 1.



Attest:  
*E. Mitchell*  
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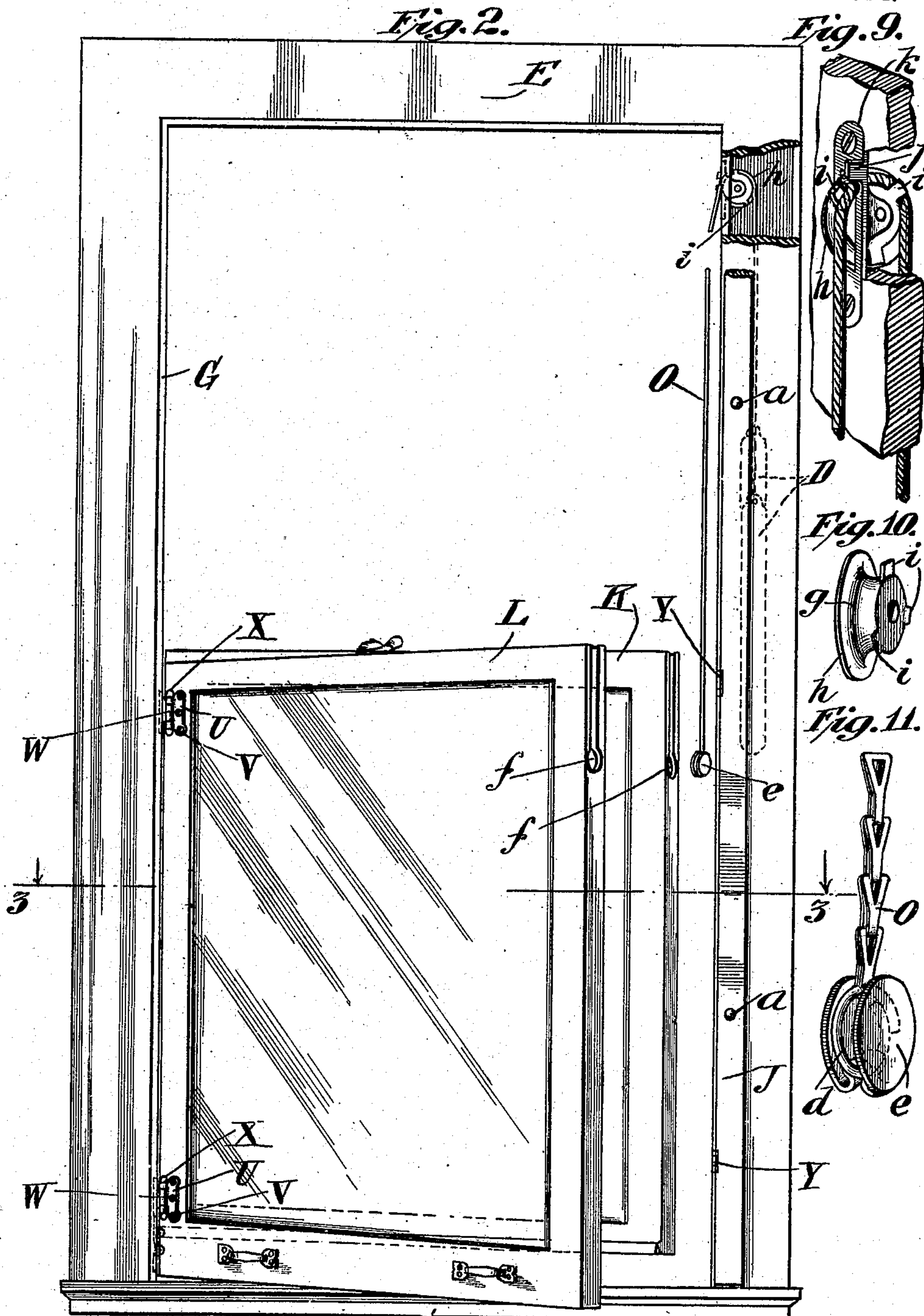
*A*  
Inventor:  
Bernard Hausmann  
by Dickerson, Brown,  
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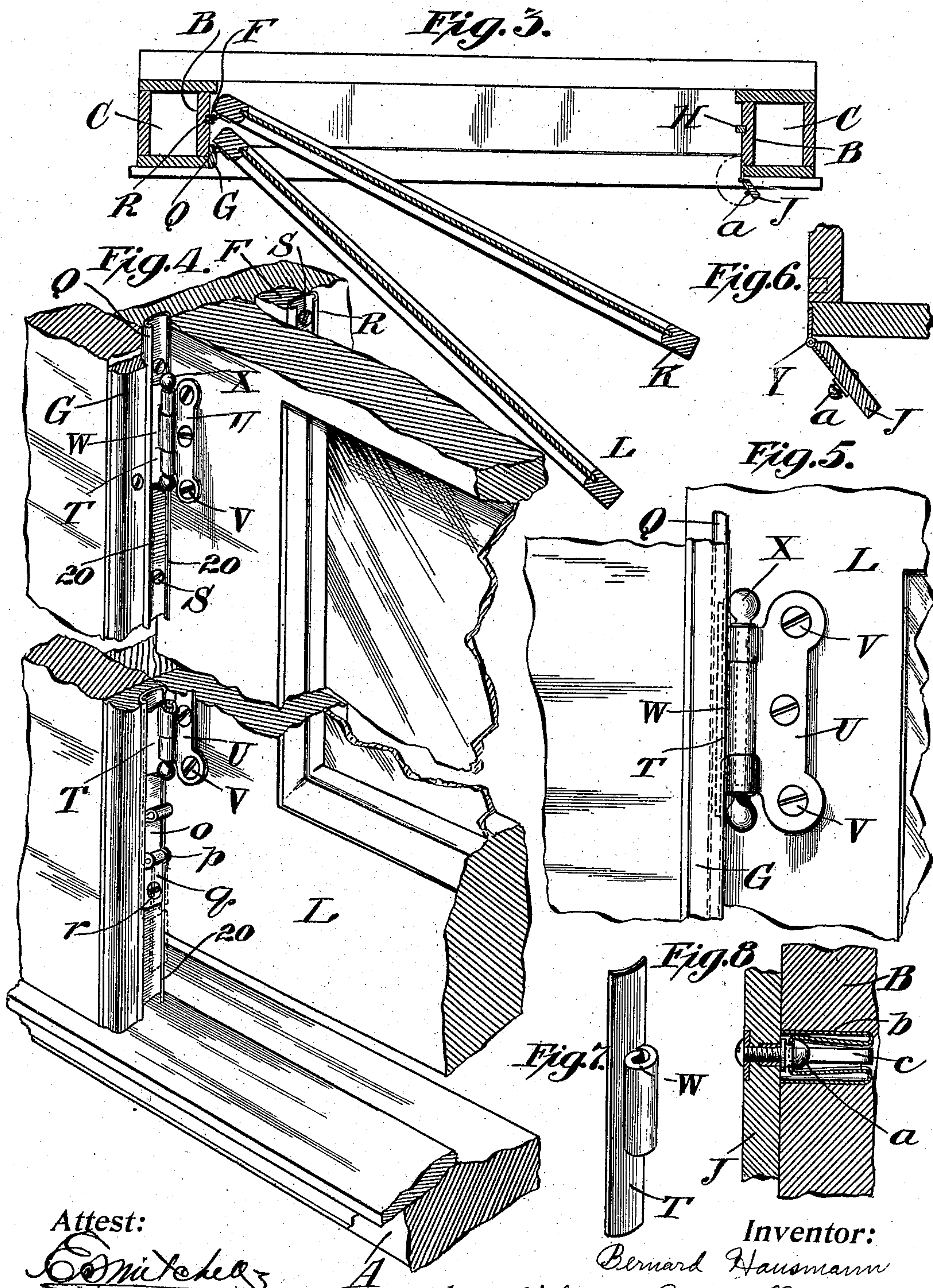
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# UNITED STATES PATENT OFFICE.

BERNARD HAUSMANN, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO HAUSMANN SASH CARRIER CO., A CORPORATION OF CALIFORNIA.

## SLIDABLE AND SWINGING WINDOW-SASH.

No. 899,731.

Specification of Letters Patent.

Patented Sept. 29, 1908.

Application filed January 28, 1907. Serial No. 354,566.

*To all whom it may concern:*

Be it known that I, BERNARD HAUSMANN, a citizen of the United States, and a resident of San Francisco, California, have invented certain new and useful Improvements in Slidable and Swinging Window-Sashes, of which the following is a specification accompanied by drawings.

This invention relates to double hung windows having vertically movable sashes, and in accordance with the invention provision is afforded for also swinging the sashes inwardly about pivotal points, so that the window sashes may not only slide but may be opened inwardly to enable them to be cleaned upon the reverse side or to provide for ventilation.

The invention is an improvement over the patent granted to me January 15th, 1901, No. 666,053, and the objects of the invention are to simplify the construction, to enable the invention to be more readily applied to a double hung window of ordinary construction, to reduce cost of labor in applying, to secure improved means for supporting the sashes, and to simplify the handling of sashes when they are to be swung inwardly.

According to the present invention less skill and labor is required to fit an ordinary window with the invention and fewer changes are required in the window. It is not necessary to rabbet the edges of the sashes in order to attach the guide and to mortise the sashes in order to attach the hinges, for according to the present invention the hinges are attached entirely on the exposed surface of the sash.

Further objects of the invention will hereinafter appear and to these ends the invention consists of means for carrying out the above objects embodying the features of construction, combinations of elements and arrangement of parts having the general mode of operation substantially as hereinafter fully described and claimed in this specification and shown in the accompanying drawings, in which

Figure 1 is a front elevation of a window embodying the invention; Fig. 2 is a front elevation of the window partly broken away and showing the sashes in a different position; Fig. 3 is a horizontal sectional view on the line 3—3 of Fig. 2; Fig. 4 is an enlarged detail perspective view partly in section and

partly broken away, showing part of the improved construction. Fig. 5 is an enlarged detail view of one of the hinges; Fig. 6 is a detail horizontal sectional view illustrating the locking means for the inside stop; Fig. 7 is a detail view showing the sliding portion of the hinge; Fig. 8 is a detail vertical sectional view illustrating the construction of the inside stop lock; Fig. 9 is a detail perspective view partly broken away and partly in section, illustrating the construction of the sash pulley; Fig. 10 is a perspective view of the pulley wheel; Fig. 11 is a perspective view of the chain fastener.

Referring to the drawings, A represents the window sill and B are the sides of the window frame or pulley stiles. The usual boxes C are provided for the sash weights D, while E is the upper portion of the casing.

One side B of the pulley stile is provided in this instance with the parting strip F and the inside stop G, while the other side is provided with the parting strip H and inside stop J. In some instances the inside stop G may be formed integral with the window frame and the parting strip may also be formed integral with the frame. The window sashes K and L are adapted to slide vertically in the window frame and are attached by slidable cords or chains O and P to the weights D.

According to this invention, suitable shallow channel guides Q and R having hook-like flanges at their opposite edges are secured in any suitable manner as by means of the screws S adjacent to or alongside of the window sashes, in this instance the guides being shown secured flat against the parting strip F and the inside stop G, and facing inwardly towards the other side of the frame although it is to be understood that the guides may be secured directly to the window frame adjacent or near the window sashes in case the strips F and G form part of the frame, or in case there are no strips or no portions which correspond to said strips. If there are no projections corresponding to the strips F and G, the guides may be secured directly to the pulley stile or frame. These guides may be constructed of metal bent or otherwise formed into the required shallow channeled shape, and they may be of any desired shape. Slides T are movable vertically in the shallow guideways Q and R.



Each slide consists of a metallic plate which engages at its opposite edges the flanges of said shallow guideway and which bulges outward at its central portion between said flanges. The slide is provided with a pintle barrel W disposed close to its outer bulging face, and constitutes one leaf or member of a hinge for the sash. The other leaf or member U is suitably secured by means of screws V or otherwise to the inner face of the sash and is pivotally connected to the socket or barrel W of the slide T by means of the pin X. This construction of the slide enables it to snugly engage the flanges of the guide and to maintain its snug fit and position when the sash is swung open. The outward bulge of the plate enables the pintle barrels of the hinge to be disposed close to the plate and yet to permit the sash to swing clear when opened, avoiding elongation of the shank between the slide and the barrel and securing strength, rigidity and resistance to bending strains. According to this construction the window sashes may be raised or lowered and swung inwardly as desired. The slide is held in place against the back of the guide in its operation by the inwardly turned lips or flanges 20 of the guide and holds the sash in its position when swung inwardly through its attachment thereto by means of the hinge of which it forms a part. This invention may be applied to either double hung windows or to a single sash which, in order to be opened, requires to be swung either inwardly or outwardly. I am not to be understood as limiting the invention to a window opening on any particular side, for the hinges may be provided at either side desired, according to the conditions to be met. If desired, the inside stop G may be rabbeted as shown, for the reception of the guide Q, although this is not necessary. It will be seen that this invention may be applied directly to a double-hung window without difficulty, and without requiring any change in the general construction of a double hung window. Since the hinge is applied directly to the surface of the window sash, it is not necessary to remove the sashes for the purpose of fitting the attachment thereto.

In order to permit the window to swing, the inside stop J on the other side of the window is pivoted in any suitable manner as by means of the hinges Y or otherwise constructed to be temporarily removed. In the present instance the inside stop J is provided with a fastening illustrated in Figs. 6 and 8, and this may be of any desired construction. In this instance the stop J being provided with a button-head *a*, while the frame is provided with a spring socket *b* having the spring finger *c*. The parting strip H is also adapted to be temporarily removed to permit the sash K to swing inwardly, and any suitable

construction may be provided for this purpose.

Means are provided for temporarily detaching the cords or chains O from the sashes. In this instance said chains being provided with split rings *d* to which are secured the folded disks *e* adapted to be held in the sockets *f*. Any other suitable device may be provided for detachably connecting the cords or chains O to the window sash.

Suitable means are provided for stopping or holding the weight in order to permit the detachment of the sashes, and in this instance I have shown the pulley wheels *g* provided with one continuous flange *h*, and one discontinuous or mutilated flange having any desired number of projections *i*, which are adapted to cooperate with a lug or projection *j* on the face of the pulley case *k* so that the cord or chain may be held between one of the projections *i* and the lug or projection *j* by the weight of the sash weight.

It is desirable to provide means for holding the sash clear of the window sill when it is desired to swing the sash inwardly, thus avoiding scratching of the window sill and permitting free swinging of the sash. Any suitable means may be provided for this purpose, but in the present instance I have shown a stop *o* hinged at *p* to a plate *q* suitably secured in the guide Q as by means of the screw *r*. The dotted lines show the stop *o* in lowered position, in which case the lower sash L rests on the window sill in its normal position. When the stop *o* is raised as shown in full lines, the slide T of the hinge may bear on the top of the stop and thus maintains the window sash clear of the window sill and also supporting the sash.

I claim and desire to obtain by Letters Patent the following:

The combination of a window frame having a sash guideway, a sash movable vertically therein, a shallow metallic guideway provided with hook-like flanges at its opposite edges and detachably secured to said window frame wholly at one side of and adjacent to said sash guideway, slides movable vertically in said shallow guideway and severally consisting of a metallic plate engaging at its opposite edges the flanges of said shallow guideway, said plate having a face bulging outward between said flanges and provided with a pintle barrel disposed close to said bulging face, and plates secured to the face of said window sash and hinged to said pintle barrels.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

BERNARD HAUSMANN.

Witnesses:

OLIN A. FOSTER,  
A. L. O'BRIEN.