

B. HAUSMANN.

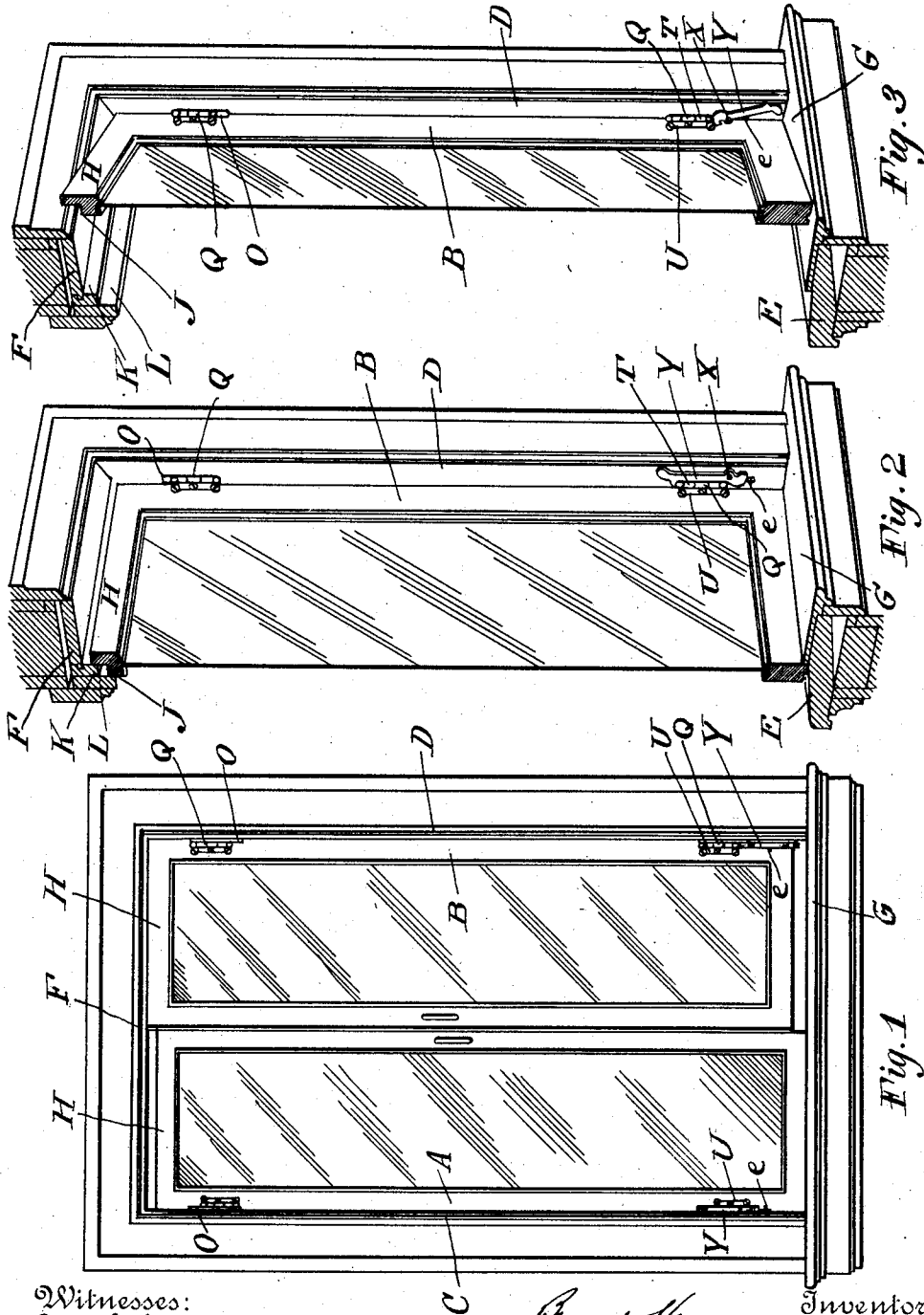
SASH LIFTING APPLIANCE FOR VERTICALLY MOVABLE AND SWINGING WINDOWS.

APPLICATION FILED DEC. 8, 1909.

997,387.

Patented July 11, 1911.

2 SHEETS—SHEET 1.



Witnesses:
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A. Parkman

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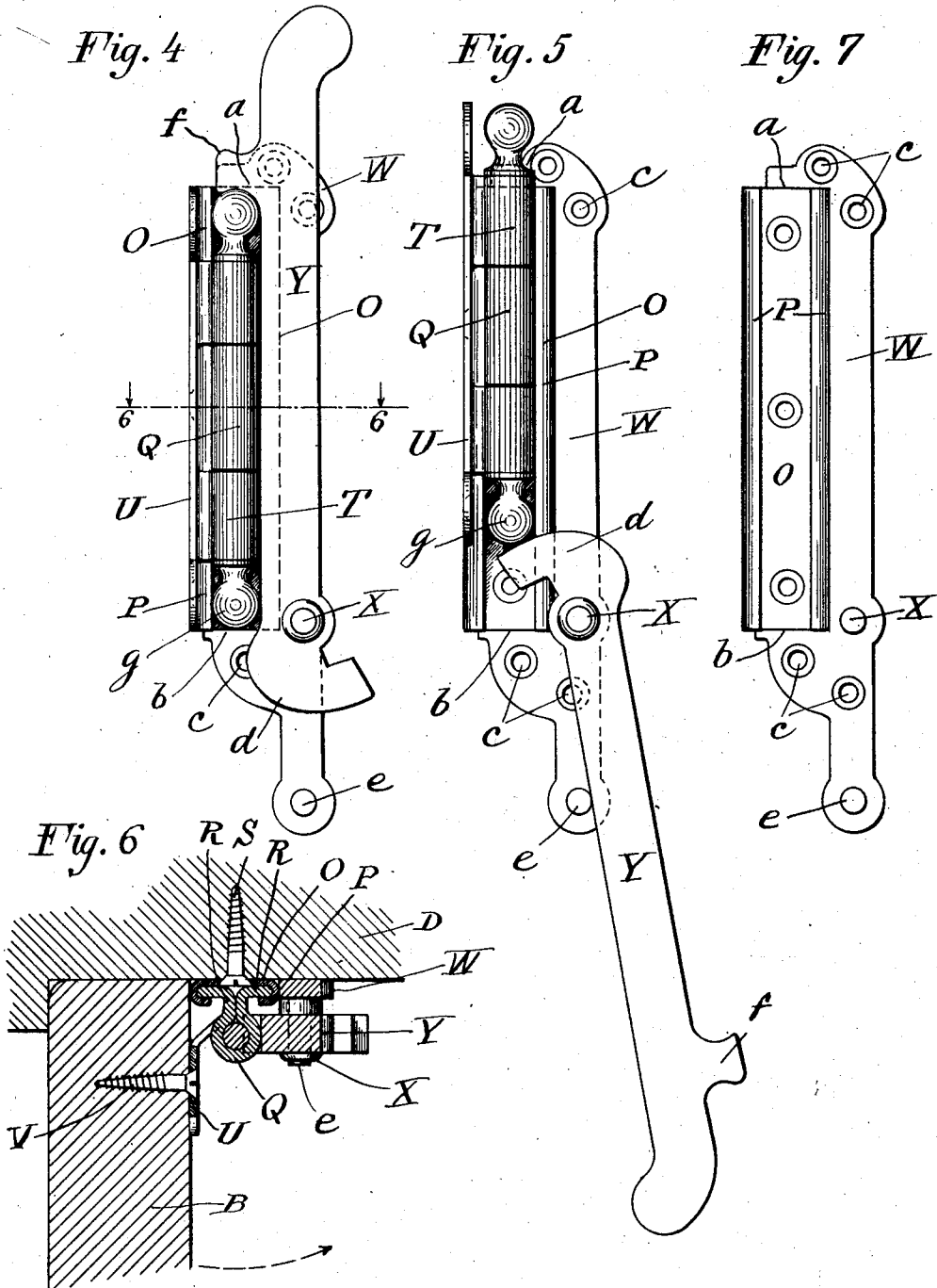
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

BERNARD HAUSMANN, OF SAN FRANCISCO, CALIFORNIA.

SASH-LIFTING APPLIANCE FOR VERTICALLY-MOVABLE AND SWINGING WINDOWS.

997,387.

Specification of Letters Patent. Patented July 11, 1911.

Application filed December 8, 1909. Serial No. 531,980.

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 Sash-Lifting Appliances for Vertically-Movable and Swinging Windows, of which the following is a specification, accompanied by drawings.

This invention relates to improvements in sash lifting appliances, and the objects of the invention are to improve upon the construction of such appliances and enable the sash or sashes to be readily lifted and swung inwardly over the stool of the window frame for purposes of cleaning and to afford other conveniences, while at the same time providing a weather-tight window. To these ends the invention in one of its preferred embodiments is described and claimed in this specification and shown in the accompanying drawings, in which—

Figure 1 is a front view of a casement window with one sash raised and ready to be swung inwardly; Fig. 2 is a perspective view partly in section showing the sash in lowered position; Fig. 3 is a perspective view partly in section showing the sash raised and opened; Fig. 4 is an enlarged detail front elevation of one of the hinges and lifting lever showing the position of the parts when the hinge is lowered; Fig. 5 is a view similar to Fig. 4 with the hinge in raised position; Fig. 6 is a detail horizontal sectional view on the line 6—6 of Fig. 4, also showing a portion of the window frame and sash in section; Fig. 7 is a detail front elevation of the track within which the hinge slides and the frame or support for the lever.

Referring to the drawings, A and B represent the window sashes of a casement window. The frame of the window comprises the sides C and D, the base E, the top F and the stool G, with the necessary structural parts to complete the details of the window frame, as the molding, etc. The top rails H of the window sashes as shown are rabbeted at J to afford clearance and make a weather-tight connection between said rails H and the strips K and L at the top of the window frame. By this means the window sashes may be raised or lowered and at the same time maintain a weather-tight connection. In closed position the sashes rest on the window-sill E outside of

the stool G, and in accordance with my invention means are provided for raising either or both sashes and swinging them inwardly over the stool.

In the drawings a double window is shown and each sash is provided in this instance with two hinges, although the number of hinges may be varied in accordance with the size of the sash and the invention may be applied to a single window. The hinges preferably slide bodily in bracket fastenings preferably in the form of short tracks O having the inturned flanges or guides P. Preferably the central hinge member or barrel Q is provided with flanges R which slide in the tracks and are guided and retained by the guides P. The tracks O may be suitably secured to the stops on the inside of the window frame or on the inside of the sides C and D of the frame proper, as by means of the screws S. The hinge members T are provided with the base portions U adapted to be secured to the window sashes as by means of the screws V. According to this construction the hinges slide bodily in the tracks O and it is only necessary to provide tracks of sufficient length to permit the window sashes to be raised above the stools G.

Preferably lever plates W are provided adapted to be secured to the sides C and D and having pivots X for the lifting levers Y. These lever plates W are preferably provided with shoulders *a* and *b* adapted to receive the tracks O, so that when the lever plates W are secured to the sides of the window the tracks O may be readily located in proper relation to the levers. By this means the position of the pivots of the lifting levers Y relative to the hinges is determined without the necessity of experimentation and the lever plates act at once as a gage for this purpose.

The lever plates W may be secured to the sides of the window frame by any suitable means, and for this purpose the apertures *c* are provided in the plates. The lifting levers are pivoted at X to the plates W and are provided with the cams *d* of such form and construction that when the lever is in the position indicated in Fig. 4 the window sash is lowered and when the lever is in the position indicated in Fig. 5 the hinges and with them the sashes will be raised above the stool G of the frame. The plates W are provided with the stop pin *e* to limit the

downward movement of the levers and the levers Y are also provided with the projections or lugs *f* which extend over the top of the hinges when the levers are in raised position, thus locking and securing the sashes when closed so that they cannot be opened from the outside.

The curvature of the surface of the cam *d*, and the distance between the cam and the lower ball *g* of the hinge is so adjusted when the lever is in upright position that the cam does not begin to raise the hinge until the lever has moved outwardly at a considerable angle, sufficient to give the operator a strong purchase. This also gives the operator an opportunity to obtain a firm grasp on the lever before the lifting operation commences. By this means the sash may be lifted with very little effort.

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

1. A sash lifting appliance for a vertically movable and swinging window, comprising in combination a hinge having one member adapted to be fastened to a sash, a bracket fastening having retaining guides adapted to be fastened on the window frame, the other member of said hinge being slidable

on said bracket fastening, and a lever adapted to be mounted in connection with said hinge and bracket fastening, and acting upon the hinge to bodily raise and lower said hinge.

2. A sash lifting appliance for a vertically movable and swinging window, comprising in combination a hinge having one member adapted to be fastened to a sash, a bracket fastening having retaining guides adapted to be fastened on the window frame, the other member of said hinge being slidable on said bracket fastening, and a lever adapted to be mounted in connection with said hinge and bracket fastening, and acting upon the hinge to bodily raise and lower the same, said lever having means at its outer end for engaging the upper end of the hinge for locking the hinge when the hinge is lowered.

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

BERNARD HAUSMANN.

Witnesses:

E. VAN ZANDT,
E. P. LA GAY.

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