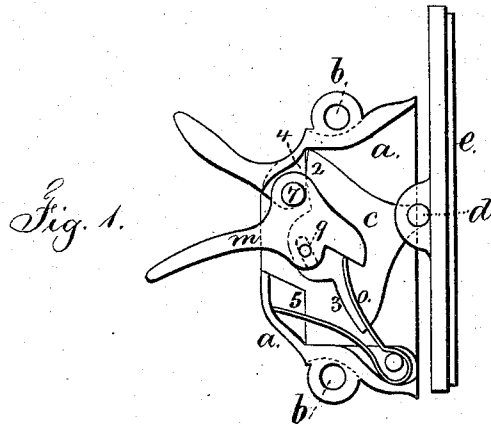
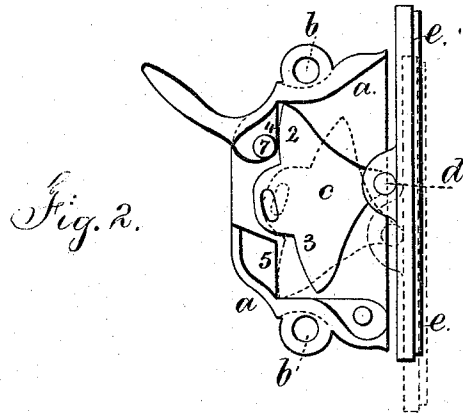


J. B. WILFORD.

Sash-Holder.

No. 160,735.

Patented March 9, 1875.



Witnesses

Chas. H. Smith
Harold Ferrell

Inventor

John B. Wilford.
per Lemuel W. Ferrell
att'y.

UNITED STATES PATENT OFFICE.

JOHN B. WILFORD, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
HEZEKIAH BRADFORD AND HERMAN HAMBURGER, OF SAME PLACE.

IMPROVEMENT IN SASH-HOLDERS.

Specification forming part of Letters Patent No. **160,735**, dated March 9, 1875; application filed
January 19, 1875.

To all whom it may concern:

Be it known that I, JOHN B. WILFORD, of Philadelphia, in the State of Pennsylvania, have invented an Improvement in Sash-Supporters, of which the following is a specification:

Sash-supporters have been made with a pressure-plate that acts against the window-frame, and is pressed thereto by inclines upon the shell or case, which is screwed to the sash. In this instance the friction between the surfaces of the inclines sometimes interferes with the correct action of the pressure-plate, and this friction, in addition to the wedging action of the inclines, renders it difficult to withdraw the pressure-plate without employing more force than is desirable.

My invention is made to insure a correct and reliable action of the pressure-plate, and a diminished friction, either in applying or withdrawing the pressure-plate.

I make use of a double-cam rocker, in combination with the pressure-plate, and a withdrawing lever and spring, so arranged that the lever can be used to withdraw the pressure-plate; but the spring, under ordinary circumstances, presses the pressure-plate against the window-frame, and any movement of the window up or down causes the rocking cam to press the plate firmly upon the frame by increasing the distance between the pressure-plate and the bearing-surface in the case that is attached to the window, so as to move the pressure-plate bodily against the window-frame.

In the drawing, Figure 1 is an elevation of the fastening complete, as viewed from the rear side; and Fig. 2 is a diagram illustrating the rocking movement of the cam.

The case *a* is hollow, and it is attached to the window-sash by the screws at *b*. Within the case is a rocking cam, *c*, that is jointed at *d* to the pressure-plate *e*, which plate *e* is preferably faced with india-rubber, in order to promote the adhesion of the pressure-plate to the window-frame without injuring or scratching the same; but leather or other suitable material may be used in place of rubber. At the opposite side of the cam *c* to the joint, the rocking surfaces 2 3 are provided, and they

bear against the portions 4 and 5 of the case *a*; and the shapes of these rocking surfaces are such that the angle between the point of bearing contact, the joint, and the casing will be about sixty degrees, as illustrated in the diagram, Fig. 2, and in consequence of the shape of the cam-rockers this angle will not materially alter when the surface of the pressure-plate is near the case *a*, or at its extreme movement.

By this construction the pressure-plate will be forced against the window frame or casing with a nearly uniform power, regardless of the accuracy with which the window-frame may be made, and the pressure-plate will not stick or become immovably wedged, but the pressure-plate can be liberated, as next described. It will be understood that the angle of pressure may be made more or less than sixty degrees, according to the circumstances of use, or as may be desired; and the joint at which the pressure is applied being in the middle of the pressure-plate, and near the surface thereof, there is no tendency to force either one end or the other of the pressure-plate into the surface of the window-frame.

The bent lever *m* upon the stud 7 is operated by the spring *o* between itself and the case, and there is a pin, 9, entering a groove in the cam *c*, that enables the attendant to draw back the rocking cam *c* and the pressure-plate *e*, to release the window-sash.

It will be understood that the pressure-plate is to be brought away from the window-frame and held (by the lever) while raising or lowering the window, and that, as soon as the spring is allowed to act by releasing the lever *m*, the pressure-plate is pressed toward the window-frame by the spring *o*, and as the surfaces come into contact, and the window descends slightly, the cam is rocked, and the pressure-plate is forced firmly against the frame, so as to support the sash and lock or fasten it.

The spring *o* may be dispensed with, when the pressure-plate and rocking cam are forced toward the frame by a weighted lever, or otherwise.

This sash-supporter also serves as a lock to prevent the window being raised, for the cam-

rocker swings into the opposite direction, and acts upon the pressure-plate, to firmly press the same upon the frame if an attempt is made to raise the window, the action of the cam-rocker being the same if the window is raised as it is in supporting the sash. A metal plate or cap may be applied at the back of the case, so as to prevent the moving parts coming into contact with the sash.

I claim as my invention—

1. The cam-rocker *c*, jointed to the pressure-plate *d*, and acting between the fixed surfaces

4 and 5 of the case and the said pressure-plate, substantially as set forth.

2. The lever *m* and spring *o*, in combination with the rocking cam *c* and pressure-plate *d*, substantially as specified.

Signed by me this 12th day of January, A. D. 1875.

JNO. B. WILFORD.

Witnesses:

W. C. STRAWBRIDGE,

J. BONSALE TAYLOR.