

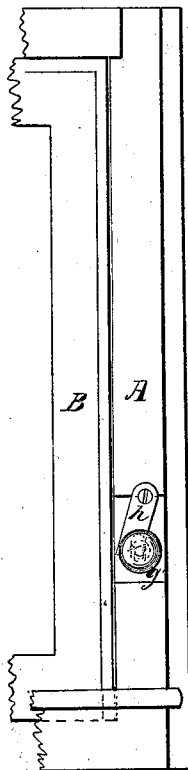
*S. W. Woodward,*

*Shutter Worker.*

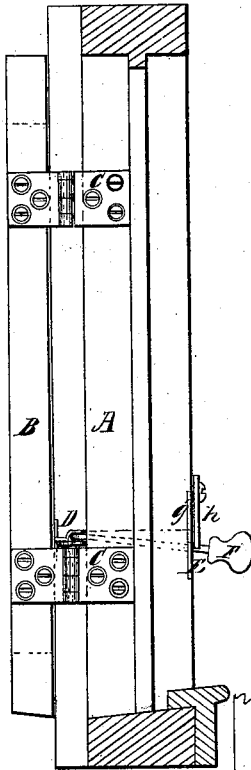
*Patented Apr. 17, 1866.*

*N<sup>o</sup> 54,077.*

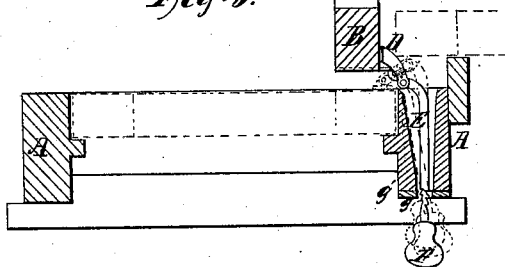
*Fig: 1.*



*Fig: 2.*



*Fig: 3.*



*Witnesses:*  
*H. C. Torbush*  
*M. Langworthy*

*Inventor:*  
*Stephen W. Woodward*

# UNITED STATES PATENT OFFICE.

STEPHEN W. WOODWARD, OF BUFFALO, NEW YORK, ASSIGNOR TO HIMSELF AND S. HUME, OF SAME PLACE.

## IMPROVED DEVICE FOR OPENING AND CLOSING WINDOW-BLINDS.

Specification forming part of Letters Patent No. 54,077, dated April 17, 1866.

### *To all whom it may concern:*

Be it known that I, STEPHEN W. WOODWARD, of the city of Buffalo, county of Erie, and State of New York, have invented a new and Improved Device for Opening and Closing and Fastening Window-Blinds from the Inside; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure I is an inside elevation of blind or shutter and of one jamb of window-casing to which said shutter is hinged, and showing the application of my improvement thereto. Fig. II is a cross-sectional elevation of window-casing, showing the blind or shutter in its open position and also the opening device. Fig. III is a sectional plan taken at line 1 2 of Fig. II, showing the blind in several positions from open to shut, and also the corresponding positions of the operating device.

The nature of this invention consists in the application to a window blind or shutter of an arm or lever, projecting beyond the axis of the hinges upon which the blind swings, and the combination with said arm of a rod or bar, hinged to the end thereof, and passing through the window-casing to the inside thereof, so that, by means of said rod, power may be applied to said lever in a manner to cause it (by making a fulcrum of the hinge) to open or shut the blind, as may be desired.

In the accompanying drawings letters of like name and kind refer to like parts in each of the figures.

A represents the window-casing, and B a blind or shutter, hinged thereto by hinges C, in the common manner.

D represents the arm or lever, attached to the blind near the lower hinge, in a firm and secure manner, by screws or otherwise. This arm projects beyond the axis of the hinges on the opposite side from the shutter far enough to obtain sufficient leverage (the hinges acting as the fulcrum) to operate the blind easily.

E represents the rod or bar, hinged to the end of lever and passing through the jamb of the window-casing to the inside thereof, it being provided at its inner end with a handle, F, by which it is operated. The opening made through the jamb for the passage of this rod is sufficiently large to allow for the free movement of the rod therein.

The position of the lever arm and rod when the blind is closed is clearly shown in Fig. III by the dotted blue lines, and their position when the blind is half-way open or at right angles to the window by the full black line, and their position when the blind is fully open by the dotted red lines.

An inspection of the figures will show that the blind is opened the first half-way by pulling upon the rod and the second half-way by pushing thereon, the momentum which the blind obtains in the first part of its opening being depended upon to carry it sufficiently past the dead-point which exists by the bringing of the rod in line with the hinges when the blind is half open, to enable the pushing movement to complete the opening. The closing of the blind is simply the reverse of the opening, the first half of its closing movement being effected by pulling on the rod and the second half by pushing thereon.

The blind is locked and held securely either in the closed or open position by notches *g* cut in the rod E, which catch in a lock-plate, *g'*, secured to the inside of the casing. The notches are released from the lock-plate by simply raising the rod, and are caught by pushing down on the same. The raising of the bar from the outside to release the catch is prevented by a button, *h*, which may be turned down thereon.

This device is extremely cheap and simple in its construction and effective in its operation. By it the shutters may be opened or closed with the least possible exertion from the inside, without involving the raising of the window and reaching out in a strained and uncomfortable position, as is required to undo the shutter-catches and fastenings now commonly used before the shutters can be opened or closed.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The combination of the notched rod E F, lock-plate *g'*, arm D, and button *h*, constructed, arranged, and attached to the window-frame and blind substantially as set forth.

STEPHEN W. WOODWARD.

Witnesses:

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W. H. FORBUSH.