

*Smith, Greely & Campaigne,*

*Blind Stop.*

*No 107,557.*

*Patented, Sep. 20. 1870.*

Fig. 1.

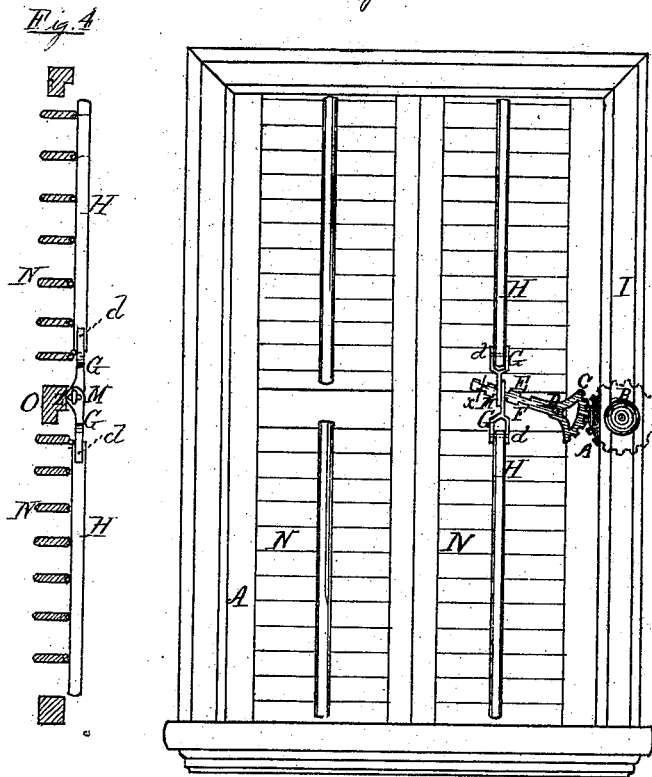


Fig. 2.



Fig. 3.



Witnesses

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# United States Patent Office.

JOHN B. SMITH, SAMUEL A. GREELY, AND ARTHUR CAMPAIGNE, OF  
CHICAGO, ILLINOIS.

*Letters Patent No. 107,557, dated September 20, 1870.*

## IMPROVEMENT IN BLIND-SLAT OPERATORS.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that we, JOHN B. SMITH, SAMUEL A. GREELY, and ARTHUR CAMPAIGNE, of Chicago, in the county of Cook and State of Illinois, have invented an "Improved Device for Operating Blind-Slats;" and we do hereby declare that the following is a full and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing and letters marked thereon making a part of this specification, in which—

Figure 1 is an elevation of a window-blind, with our device for operating slats attached.

Figure 2, a side elevation of one of the shackles for connecting the slat-rods.

Figure 3 shows the position of the levers in the shackles.

Figure 4, a vertical section of the blind, with the slats, as they are opened by the device.

The present invention relates to an improvement in that class of blind-slat adjusters which are made to operate the slats by means of spindle, cog-wheel, and rack-lever; and

Its nature consists in the peculiar construction of the shackles for connecting the slat-rods, in combination with a notched segment-lever, as the whole is hereinafter fully described and shown.

A N represent an ordinary Venetian blind, and

H H, the rods, by means of which the slats N are opened and closed; all of which are constructed in the ordinary manner.

The upper and lower rods are connected near the middle rail of blind by means of metal shackles M G, figs. 1, 2, and 4.

Those parts of the shackles shown at G are forked or clevis-formed, so that the ends of the rods H may pass into the forked parts, and be secured by pivots d, figs. 1 and 4, and the opposite ends G are provided with slots L, fig. 2, to receive the notched end E of a segment-lever E C.

At Z Z it will be seen that the shackles are much wider than at G. This construction is necessary, first, to permit suitable-sized slots L to be made, for the purpose above described, and to form a suitable incline between the points M Z of the shackles, fig. 2, so that, when the lever E C operates upon them, the shackles must move inward from the face of the blind, and thus turn the slats, as shown at fig. 4, instead of drawing down upon them edgewise, as would be the case if the shackles were straight.

In attaching the shackles to the rods, care should be taken to so connect the rods H with the shackles that the rounded parts Z M will, when the slats N are closed, project above the middle rail of blind, otherwise the slats cannot be shut closely together.

As will be seen in fig. 1, the segment-rod E C is provided with two or more notches, F. This is for the purpose of accommodating the rod to different widths of blinds, the end z, fig. 1, being cut off, if projecting through too far.

The segment C is operated by a cog-wheel, B, fastened to a suitable spindle, which is put through the window-jamb in the usual manner. If more than two sections of slats are used in one blind, the additional rod is to be coupled by shackles similar to those shown.

Having thus described our invention,

What we claim, and desire to secure by Letters Patent, is—

The forked shackles G M, enlarged at X, in combination with the notched segment-lever E C and pinion B, arranged to operate the blind-slats N, as set forth.

JOHN B. SMITH.

S. A. GREELY.

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Witnesses:

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E. E. GIBSON.