

F. W. NICHOLS.
Shutter-Workers.

No. 143,994.

Patented Oct. 28, 1873.

Fig. 1

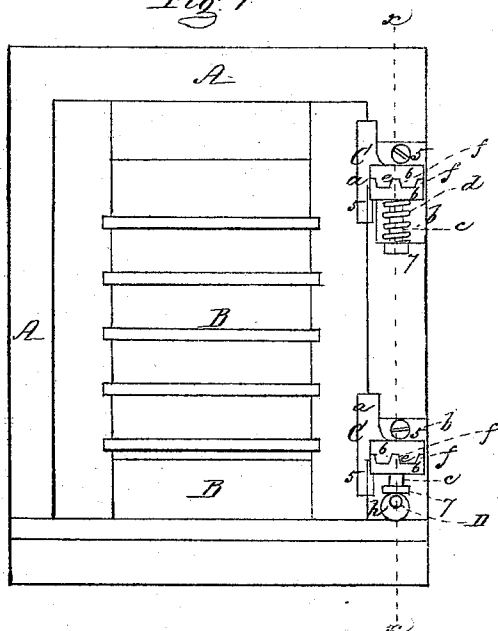


Fig. 2

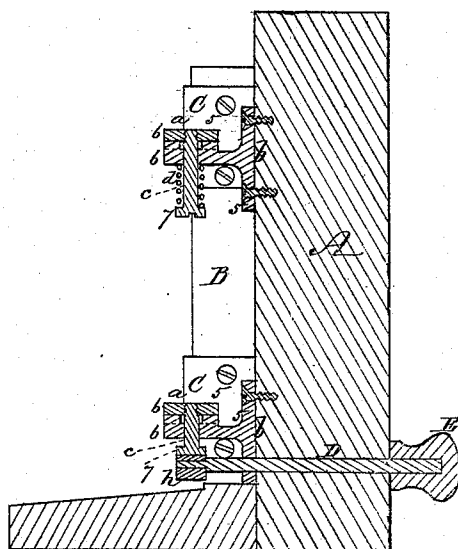


Fig. 3

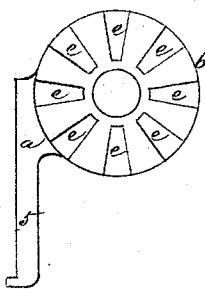
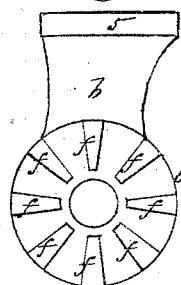


Fig. 4



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FREDERICK W. NICHOLS, OF LYNN, MASSACHUSETTS.

IMPROVEMENT IN SHUTTER-WORKERS.

Specification forming part of Letters Patent No. 143,994, dated October 28, 1873; application filed September 19, 1873.

To all whom it may concern:

Be it known that I, FREDERICK W. NICHOLS, of Lynn, in the county of Essex and State of Massachusetts have invented an Improved Blind-Hinge, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is an elevation of a window-sash and blind having my improved hinges applied thereto. Fig. 2 is a vertical section on the line *x x* of Fig. 1. Figs. 3 and 4 are elevations, enlarged, of the two portions of my improved hinge.

My invention consists in a lifting device, operated from the inside of the window, for raising the blind, so as to unlock the movable from the stationary portion of the hinge to allow the blind to be swung freely into any desired position.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A represents a window-frame, and B a blind, which is secured to the frame by means of two hinges, C C. Each of these hinges is composed of two portions, *a b*, one of which is secured to the blind, and the other to the window-frame, and each portion consists of a plate, 5, from which projects a circular block or enlargement, 6, the plate 5 being provided with holes for the passage of the screws by which it is held in place. The two portions of each hinge are pivoted or connected together by a pin or spindle, *c*, which projects down from the upper portion through an opening in the lower portion, and is provided at its lower end with a head or enlargement, 7. The spindle of the upper hinge is of greater length than that of the lower one, and is surrounded between its head 7 and the under side of the lower portion of the hinge by a spiral spring, *d*, which tends to hold the upper portion of the hinge firmly down upon the lower portion. The under surface of the circular block 6 of the upper portion of the hinge is provided with a series of radial grooves, *e*, Fig. 3, for the reception of correspondingly-shaped ribs or projections *f*, Fig. 4, on the upper surface of the circular block of the lower portion of the hinge, and by means of these projections and grooves the two portions of the hinge are locked to-

gether, so as to hold the blind securely when open or shut, and the ordinary fastenings heretofore used for this purpose can thus be dispensed with, and the annoyance so frequently caused by their getting out of order avoided.

By means of the above-described self-locking hinge, the blind can be held partially open at any desired point, which is a great convenience, while all liability of the blind slamming or being blown off the hinges is entirely avoided.

When it is desired to move the blind it is merely necessary to raise it so as to unlock the projections *f* from the grooves *e*, when the blind can be swung into any desired position, and on releasing it the grooves will drop over the projections and lock it securely in place.

Where, however, the blinds are heavy, I employ a lifting device which will now be described.

D is a horizontal shaft, which extends through the window-frame A, and is provided on the inside with a knob or handle, E, by which it may be turned.

To the outer end of this shaft is secured an eccentric, *h*, which bears against the head 7 of the spindle *c* of the lower hinge, and thus, as the shaft is turned, the blind is raised against the resistance of the spring *d*, and the hinges unlocked, as desired, and when the blind has been swung into the desired position, the eccentric is turned so as to allow it to drop, when the hinges will be locked as required.

I do not confine myself to the use of an eccentric for lifting the blind, as it is evident that some other equivalent mechanical device (as, for instance, a lever) may be employed instead.

What I claim as new, and desire to secure by Letters Patent, is—

In combination with the blind-hinge C C, a lifting device, L, operated from the inside of the window for raising the blind to unlock the movable from the stationary portion of the hinge, substantially as described.

Witness my hand this 13th day of September, A.D. 1873.

FREDERICK W. NICHOLS.

In presence of—

P. E. TESCHEMACHER,
W. J. CAMBRIDGE.