Muller & Hood,

Shutter Worker.

No. 83,989. Patented Nov. 10, 1868.

Fig. 1.

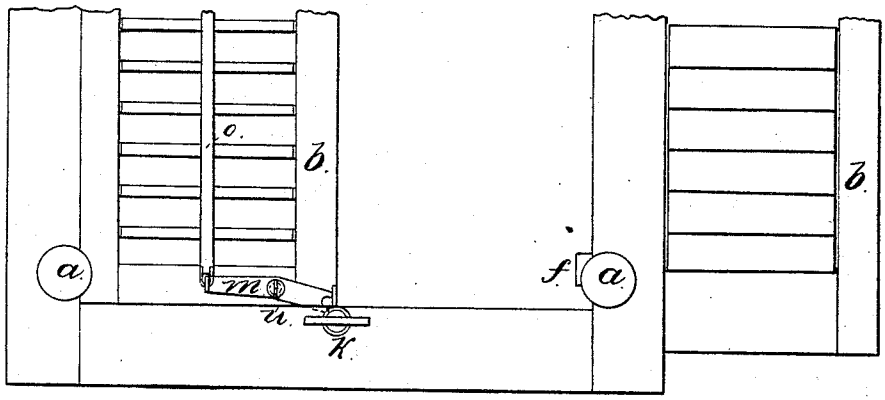


Fig. 2.

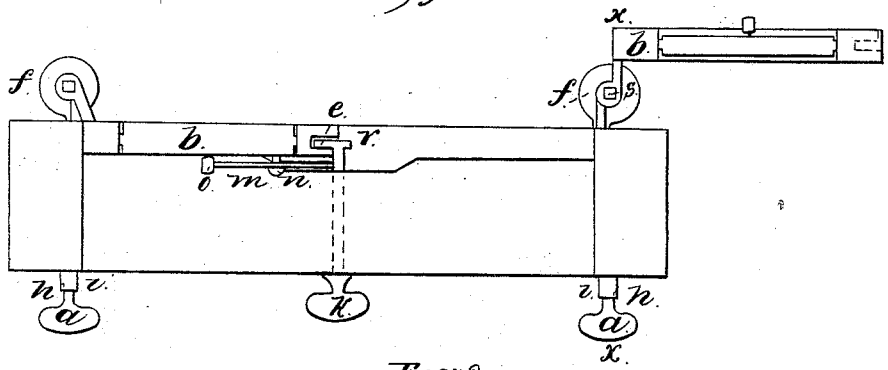
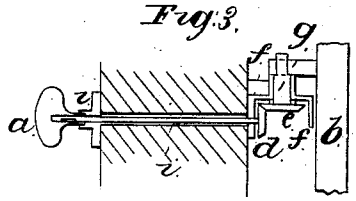


Fig. 3.



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LOUIS MULLER AND CORNELIUS HOOD, OF HARTFORD, CONNECTICUT.

Letters Patent No. 83,989, *dated November* 10, 1868.

IMPROVEMENT IN SHUTTER-WORKERS.

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, LOUIS MULLER and CORNELIUS HOOD, of Hartford, in the county of Hartford, and State of Connecticut, have invented certain new and useful Improvements in Operating Window-Blinds; and we do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

Our invention consists in the novel arrangement of the parts of a hinge of a window-blind, and in connecting it with the handle upon the inside of the window, in such a manner that the blind can be operated from the inside, to open and shut it, and to lock it open or shut.

Also, in a contrivance for opening and closing the slats of the blind, by means of a handle upon the inside of the window, so that they can be operated without opening the sash.

Figure 1 is a front inside view of the lower part of a window, showing our improvements, having one blind closed, with its slats open, and the other blind open, with its slats closed.

Figure 2 is a top view of the same.

Figure 3 is a vertical section through the line *x x*, fig. 2.

a is a handle, upon the inside of the window-frame, for opening, closing, and locking the shutter or blind, *b*. It is connected, by means of the rod *c*, with the vertical bevel-wheel *d*, which gears into the horizontal bevel-wheel *e*, attached to or forming part of the pivot *g* of the hinge of the blind.

This pivot passes through the two parts of the hinge, being round where it passes through the part attached to the window, and square where it passes through the part attached to the blind, so that when the blind is hooked on to the pivots of the hinges, in the ordinary manner, the part of the lower hinge fits on to the square, and secures the blind to the wheel *e* in such a manner that it will turn with it.

The lower part of the hinge, which is secured to the window-casing, is furnished with a box, *f*, which covers over and protects the bevel-wheels *d* and *e* from the weather. The pivot *g* and wheel *e* are secured from moving up and down by collars or rings, above and below the bearing in the lower part of the hinge, through which the pivot *g* passes.

The handle *a* is attached to the rod *c* by a small pin, working in a slot in the rod *c*, in such a manner that the handle can be drawn out and in to a sufficient extent to allow the locking-stud *h* to enter or be released from its notch in the part *i*.

The gearing is so constructed that one turn of the handle *a* opens or closes the blind, so that the stud enters the same notch in locking open or shut.

k is a handle, attached to a double button, *l l*, by a rod reaching through the window-casing for the purpose of more securely fastening the blinds when closed.

One arm, *l*, of this button is made longer than the other, and serves also as a lever or key for opening and closing the slats of the blinds.

m is a lever, turning on a pivot, *n*, and connected at one end with the rod *o* which moves the slats. At the other end it is forked, or notched, as shown in fig. 1. Between this lever and the blind there is sufficient space to allow the arm *l* to pass.

The handle *k* can be withdrawn when the arm *l* is in a vertical position, so as to bring the arm into the proper position to operate the lever *m*, by entering into the fork or notch in its end, when, by turning the handle *k*, the slats can be opened or closed.

The space between the blind and the lever *m* is for the purpose of passing the arm *l*, when it is desired to use it to move the slats of the opposite shutter, or to secure the shutters when closed, without moving the slats.

The operation of our invention will be understood from the foregoing description.

When it is desired to open a blind, the handle *a* is drawn out to unlock it, then turned to open it, and pushed in again, when opened, to lock it. The blinds, when closed, are secured by pushing in the handle *k*, and turning the button *l l* to a horizontal position.

To operate the slats, the handle *k* is drawn out, and the arm *l* inserted in the fork or notch of the lever *m*, when, by turning the handle, the slats can be opened or closed.

The advantages of our invention are, that the wheel-work of the hinge is protected from the weather; that the blind or shutter can be taken off or put on in the usual manner; that when closed, the blinds are so secured that they cannot be opened from the outside; that the slats of the blinds can be operated easily and readily without raising the sash, and left in any desired position; and that the whole apparatus is simple, easily operated, and not liable to get out of order.

Claims.

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

1. The combination of the box or casing *f* with the wheels *d* and *e* and the pivot *g*, all arranged as described.

2. The combination and arrangement of the button or arm *l*, having the connecting-rod and handle *k*, with the lever *m*, for the purpose of securing the blind or shutter when closed, and for operating the slats, substantially as described.

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Witnesses:

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