

E. A. HOLBROOK & A. E. YORK.
Blind-Slat Workers and Fasteners.

No. 148,458.

Patented March 10, 1874.

Fig. 1.

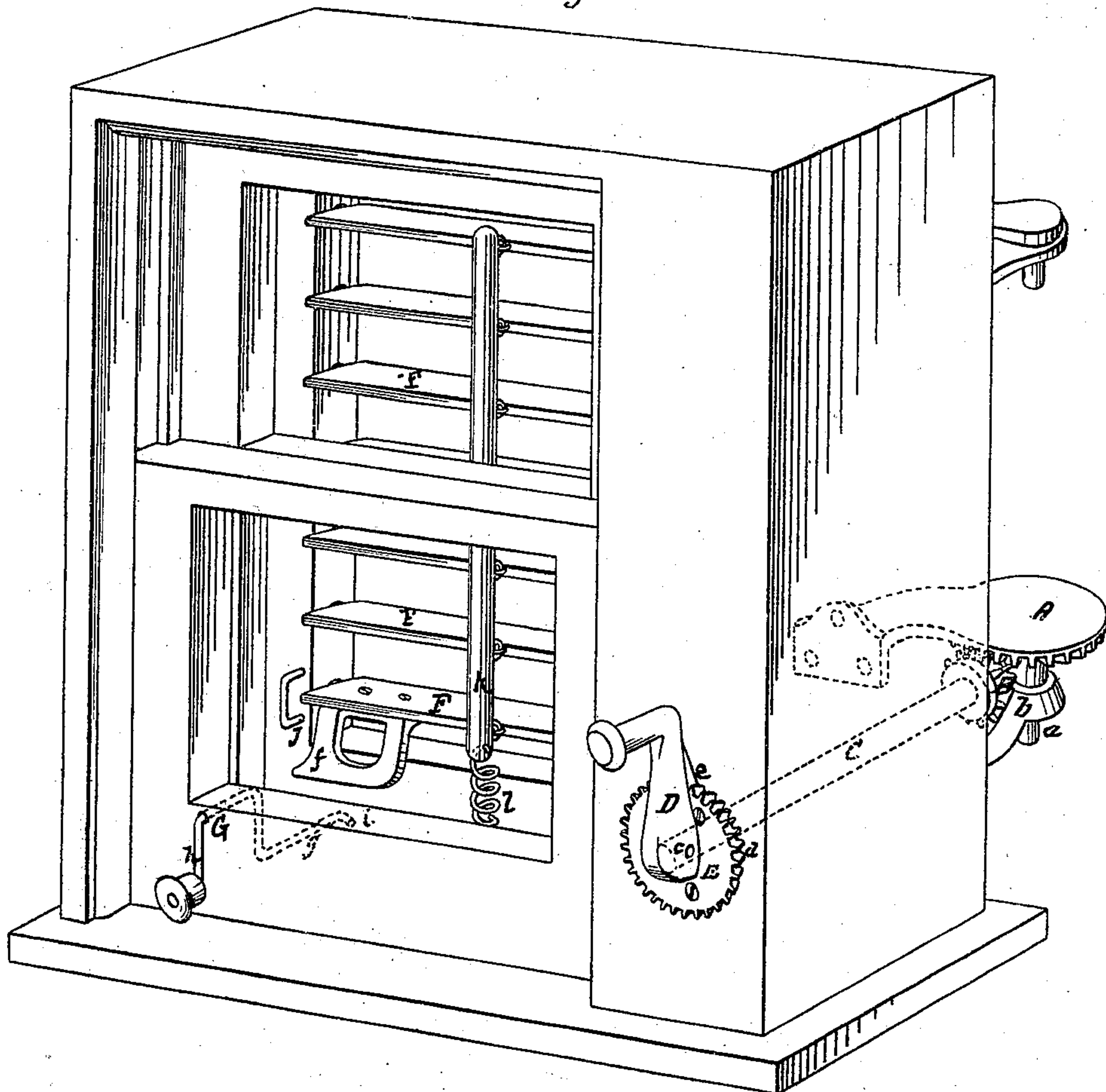
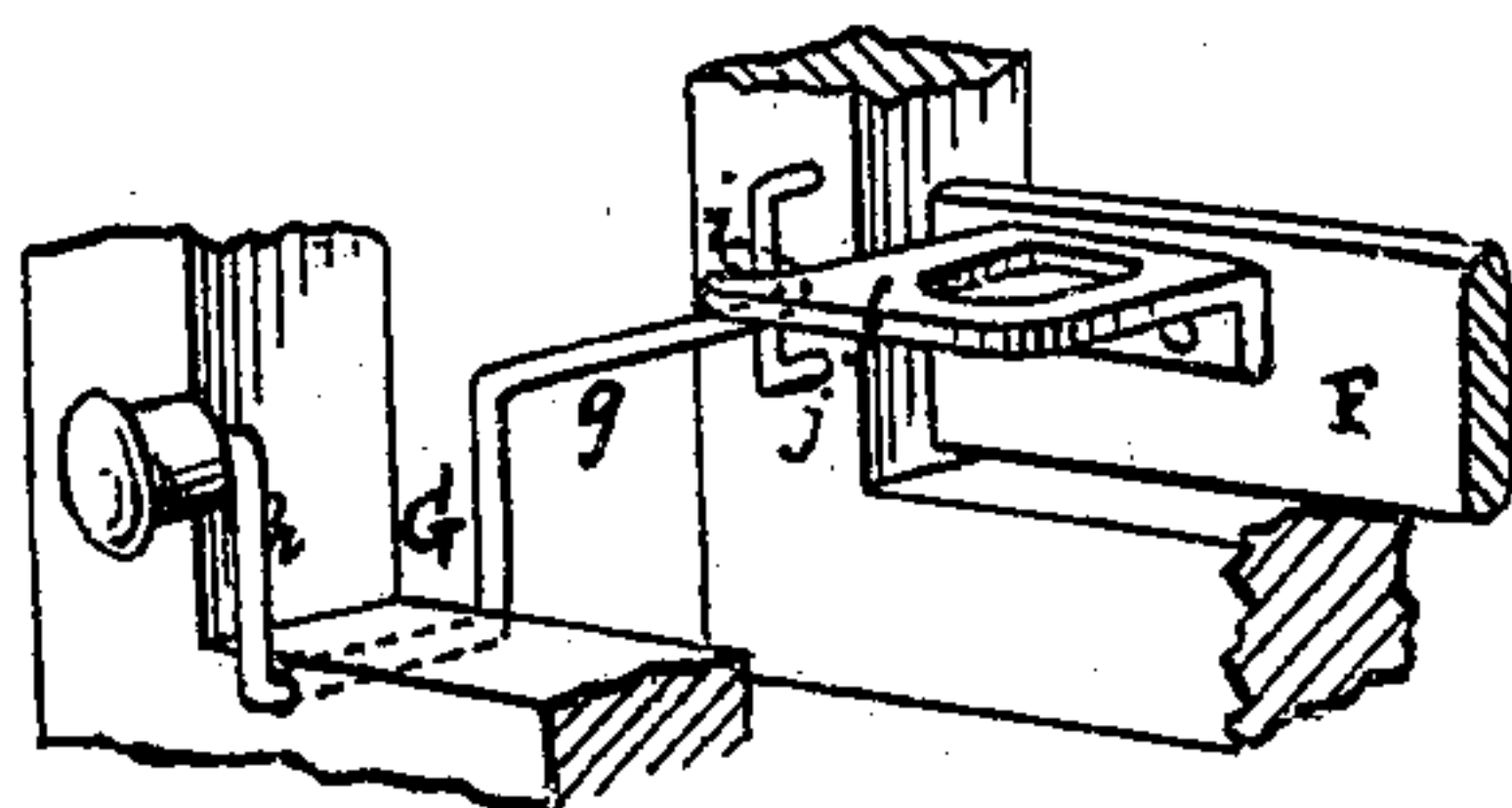


Fig. 2.



Witnesses.
Emell Dick

Inventors.
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UNITED STATES PATENT OFFICE.

EDWIN A. HOLBROOK AND ANSON E. YORK, OF WATERTOWN, NEW YORK.

IMPROVEMENT IN BLIND-SLAT WORKERS AND FASTENERS.

Specification forming part of Letters Patent No. **148,458**, dated March 10, 1874; application filed January 7, 1874.

To all whom it may concern:

Be it known that we, EDWIN A. HOLBROOK and ANSON E. YORK, both of Watertown, Jefferson county, New York, have invented certain new and useful Improvements in Blind and Blind-Slat Workers and Fasteners, of which the following is a specification:

This invention relates to means whereby window-blind slats may be operated without opening the window.

We have devised certain novel means by which the blind-slats may be opened or closed, which also, when the blind is shut, can be used as a locking device, ancillary, if need be, to the main blind-locking mechanism, to insure the secure locking of the shut blind.

The nature of our invention, and the manner in which the same is or may be carried into effect, will be readily understood by reference to the accompanying drawings, in which—

Figure 1 is a view, in perspective, of a window and window-blind provided with our invention. Fig. 2 is a perspective view of a portion of the window and blind embracing the blind-slat working mechanism.

The blind-operating device is formed, in this instance, of the lower hinge of the blind, and consists of a crown-wheel, A, fast to the blind, provided with a vertical pin, *a*, supported in a bracket step or bearing, *b*, on the outside of the window-frame. The wheel A meshes with a beveled gear, B, on the outer end of a horizontal shaft, C, which is supported in bearings in the window-frame, and extends through into the interior of the apartment in which the window is located. On the inner end of the shaft C is jointed a crank-handle, D, the joint being at *c*, so as to give the handle a slight movement on said pivot *c* toward or away from window-frame. Fast on the window-frame and encompassing and concentric with the shaft is a disk, E, the periphery of which is notched with V or wedge-shaped notches *d*. The widest part of each notch adjoins the window-frame, and the taper or decrease in width is toward the outer face of the disk, at which point the notch is narrowest. Upon the side of the crank D, contiguous to the disk, is a lug, *e*, having a wedge-shaped end corresponding in shape to the notches *d*, and located at a point

on the crank where it will just overhang or be opposite to the notches.

In operating the devices described, the crank, when it is desired to work the shutter or blind, is drawn outwardly, so that its lug will clear the notches. The crank can then be turned to open or close the blinds, more or less, as required. When the blind has reached the desired position, it can there be locked, by pressing the crank inwardly, which will cause it to move on its pivot to an extent sufficient to force the wedge-shaped lug *e* into one of the correspondingly-shaped notches on the locking-disk E. The notch and lug, by reason of their peculiar shape, will resist any tendency there might otherwise be to cause their disengagements; and an attempt to move the shutter—which, by reason of the bevel of the gear B, would tend to move the shaft C longitudinally inward—would have the effect to wedge the lug more tightly in the notch. In this way a very convenient locking mechanism is obtained.

We do not, however, here claim the devices operating as above described, inasmuch as we contemplate making them the subject of a separate application for Letters Patent.

In Figs. 1 and 2 are shown means for operating the slats, and also for fastening the blinds, if needed. On one of the slats F, the bottom one in this instance, is a plate, *f*, which we will term the lifting-plate. This plate, when the slats are open, hangs down nearly vertically, as seen in Fig. 1, being slightly inclined at its lower end toward the window. In the window, at a point opposite this lifting-plate, is the slat-operating arm G, which has an exterior crank-arm, *g*, extending out under the plate *f*, and an interior handle, *h*, by which the exterior crank can be turned so as to rise or fall. By turning this crank to the right, it will come in contact with and lift the plate, and, consequently, close the slats, as indicated in Fig. 2.

To enable this device to serve also as a means of locking the shutter or blind, we form on the outer end of the crank-arm *g* a hook, *i*, so located that, when the crank-arm is turned to close the blinds, it will catch in and engage a staple, *j*, on the blind, as seen in Fig. 2. The plate *f* is cut away in the center, so as to

permit the hook, as it comes uppermost during the turning of the crank, to pass the plate without interference.

In order to open the window without interference at all with the slats, the crank can be turned a little to the left from the position it occupies in Fig. 1, and when thus turned it will pass clear of the plate when the window rises. With the slats, or the bar *k* which connects them, is combined a spring, *l*, attached at the one end to the bar, and at the other end to the blind, and serving to keep the slots normally open.

Having now described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The slat-operating crank-arm supported in the window, in combination with the lifting-plate connected with the blind-slats, said parts constructed and operating together substantially as shown and described.

2. In combination with the slat-operating crank-arm and the lifting-plate of the blind-slats, operating together as described, the spring for holding the slats normally open, as shown and set forth.

3. The combination, with the slat-operating crank-arm and hook formed on or carried by the outer end of said arm, of the lifting-plate on the blind-slats and the staple on the blind, under the arrangement and operation as shown and set forth.

In testimony whereof we have hereunto signed our names this 15th day of December, A. D. 1873.

EDWIN A. HOLBROOK.
ANSON E. YORK.

Witnesses:

W. W. STARKWEATHER,
E. D. MOORE.