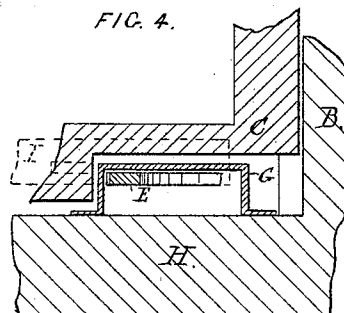
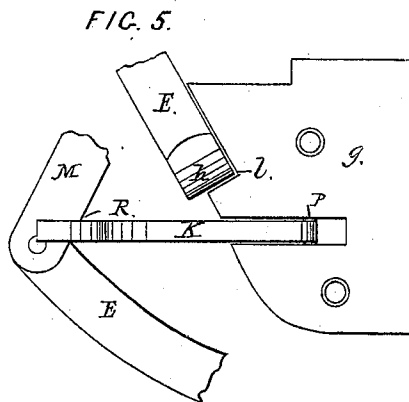
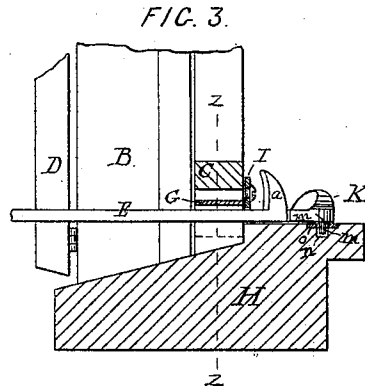
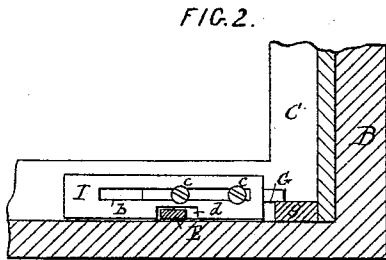
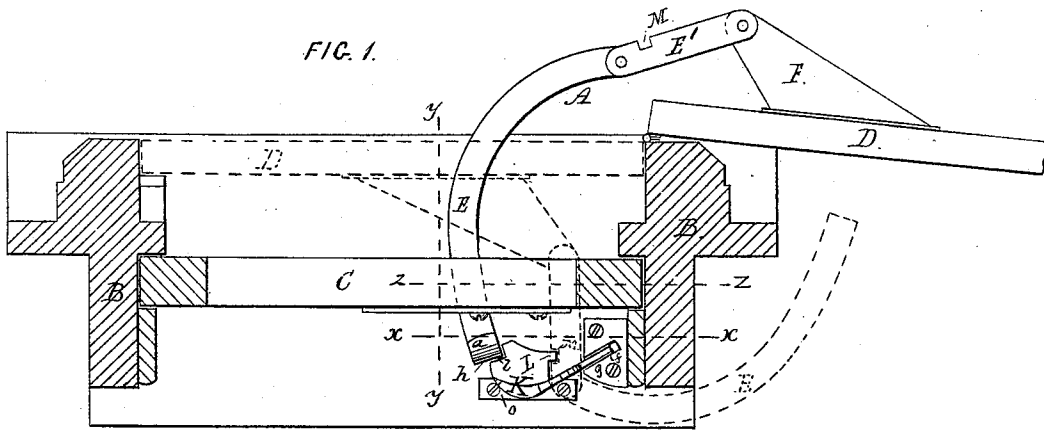


C. CHATFIELD.
Shutter-Workers.

No. 151,651.

Patented June 2, 1874.



WITNESSES.

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UNITED STATES PATENT OFFICE.

CHARLES CHATFIELD, OF MALDEN, MASSACHUSETTS.

IMPROVEMENT IN SHUTTER-WORKERS.

Specification forming part of Letters Patent No. **151,651**, dated June 2, 1874; application filed April 10, 1874.

To all whom it may concern:

Be it known that I, CHARLES CHATFIELD, of Malden, in the county of Middlesex and State of Massachusetts, have invented an Improved Device for Operating Blinds, of which the following is a specification:

This invention relates to an improved device for operating window or other blinds, the object of which is to obviate the necessity of opening the window to either operate the blind or to fasten it when shut or open, while at the same time an easy, convenient, and safe mode of operating the blind is accomplished.

The invention consists of a curved arm pivoted at one of its ends to one end of a link, which, at its other end, is pivoted to a bracket or arm secured to the inside of the blind, near its bottom, and about intermediate of its width, the arm passing through a staple and a sliding plate secured to the window-seat, the blind being fastened, when shut or open, by a double-acting catch on the window-seat, that catches in or on the link or the arm, and thus prevents the blind from being opened, shut, or moved in any way by any one on the outside of the window.

Figure 1 in the drawings represents a horizontal cross-section of a window-frame and sash, with my improved operating device in plan view, the blind being open, and showing in dotted lines the blind as shut; Figs. 2, 3, and 4, vertical cross-sections in planes of lines *x x*, *y y*, and *z z*, respectively, Fig. 1; Fig. 5, a modification of the fastening device hereinafter described.

A in the drawings represents my improved device for operating blinds; B, the frame-work of the window, and C the window-sash; D, the blind; E, an arm, pivoted or hinged to one end of the link E'. The link E' at its other end is hinged to the bracket or arm F, which is rigidly fastened to the blind D. The arm E and link E' are so hinged as to move in a horizontal plane. This arm E is bent or curved, as shown, so that in its movements in the sash-frame, when operating the blind, it shall project but a slight distance from the side edge of the window-sash; also, it adapts itself to bend round the corner of the window-frame outside of window, when the blind is open,

and when closed, as shown by dotted lines Fig. 1, it swings round the moldings of the window inside, and is out of the way. A thumb-piece, *h*, is on the other end of arm to serve as a handle. The arm E is confined, and in its operation moves in a loop or staple, G, of sufficient width to allow for the lateral movement of the arm. The staple G is secured by screws or otherwise to the window-seat H, and the bottom of window-sash is cut away sufficiently to allow for it. I, a plate covering the opening in the window-sash, and extending down to the window-seat, and adapted by the slot *b* and screws *c* to slide longitudinally as the arm E is moved or operated by the shoulder *a*, which fits loosely over the arm. K, a double-acting catch, arranged to move vertically on a pin, at *f*, in a plate, *g*, secured to window-seat. On this catch K is a tongue, L, to fit in a notch, M, in link E', securing the blind when shut, and when the blind is open the catch fastens it, by placing the end *h* of arm E in the shoulder *l* of the catch K. A pin or detent, *m*, projecting from and below the catch K, and entering a socket, *n*, in a plate, *o*, secured to window sill or seat H, prevents it from moving horizontally. The bracket or arm F, by extending in a line diagonally to or from the blind, as shown, can be secured to the blind at such a distance from the hinge that the blind, when locked, if open or shut, is held rigid and firm, and cannot be moved from the outside of window.

The arm F can be of various lengths, as circumstances require, as a hook, staple, or eye, for instance, but arranged as shown is preferable.

To operate the device—to close the blind, for instance, the window being shut—take hold of the end of arm E, and, pulling it through the staple G until the link E' is in position shown in dotted lines in Fig. 1, and the blind closed, press down the catch, which has previously been raised, and the tongue L, fitting in the notch M in the link E', securely fastens the blind. To open, raise the catch, and push the link and then the arm through the staple, until the blind is fully open. When lowering the catch in place, press the end of arm in the shoulder in the catch and the blind is secure.

The window can be raised and lowered without interfering in any manner with the operation of the device.

In Fig. 5 is a modification of the catch or fastening device, and illustrates the mode I intend to adopt for practically working my device.

The catch K swings vertically in the bearing P in a plate, *g*, firmly secured to the window-seat, and when the blind is shut it locks in the joint of link M and the arm E at R, and, in connection with the staple, securely fastens the blind from being opened; and to fasten the blind when open, the end *h* of arm E rests in the shoulder in the plate.

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

1. A curved arm, E, and link E', connected

together and attached to a blind or shutter, substantially as described, and a double-acting catch, K, fastened to the window-sill, all constructed and combined to operate as set forth.

2. In combination with the curved arm, link, and catch, either the staple G or the slide I, or both, arranged to operate substantially as described.

3. In a catch for the purposes herein set forth, provided with a pin or detent, *m*, the tongue L or shoulder *l*, or both, substantially as herein described, for the purpose specified.

The above specification of my invention signed by me this 21st day of February, A. D. 1874.

CHARLES CHATFIELD.

Witnesses:

EDWIN W. BROWN,
C. A. PEASE.