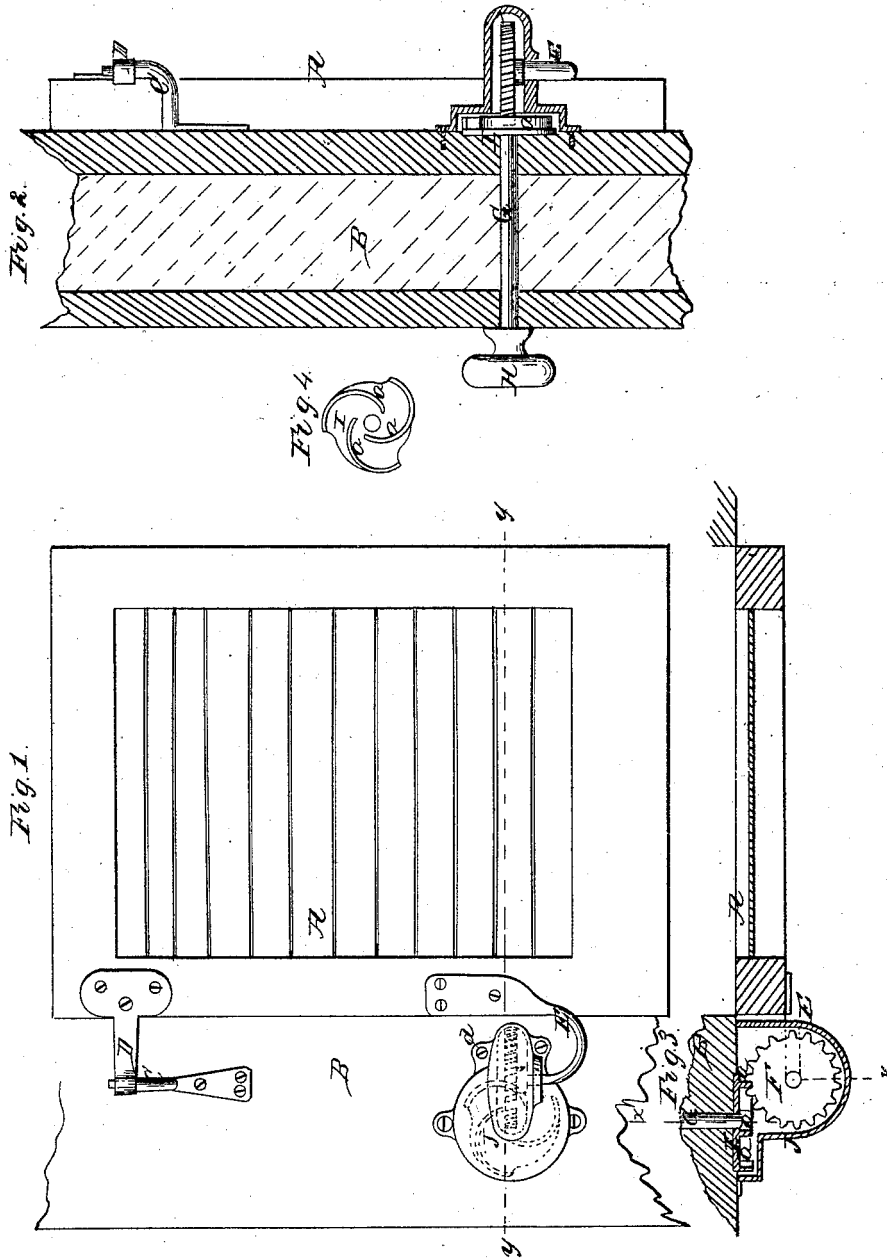


L. N. FAY & W. MASON.  
OPENING AND CLOSING BLINDS.

No. 17,922.

Patented Aug. 4, 1857.



# UNITED STATES PATENT OFFICE.

LUCIUS N. FAY AND WILLIAM MASON, OF WARREN, MASSACHUSETTS.

## MODE OF OPENING AND CLOSING WINDOW-BLINDS.

Specification of Letters Patent No. 17,922, dated August 4, 1857.

*To all whom it may concern:*

Be it known that we, LUCIUS N. FAY and WILLIAM MASON, of Warren, in the county of Worcester and State of Massachusetts, have invented a new and improved device or attachment to be applied to window-blinds for the purpose of opening and closing them from the inner side of the window without raising the sash; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is an outside view of a window blind with our improvement applied to it. Fig. 2 is a vertical section of one of the jambs of the window casing and our improvement attached thereto. (x) (x) Fig. 3 indicates the plane of section. Fig. 3 is a horizontal section of the jamb blind and our improvement applied thereto, (y) (y) Fig. 1 indicating the plane of section. Fig. 4 is a detached face view of the cam or spirally flanché plate which gears into the worm wheel.

Similar letters of reference indicate corresponding parts in the several figures.

Our invention consists in the employment or use of a worm wheel and cam or spirally flanché plate applied to the blind and jamb of the window casing as will be hereinafter fully shown and described, whereby the blind or shutter may be opened and closed from the inner side of the window without raising the sash, the blind or shutter retained or secured in an open or closed state or at any intermediate point without any extraneous fastening, and the device rendered capable of being perfectly protected from the weather.

To enable those skilled in the art to fully understand and construct our invention we will proceed to describe it.

A represents a window blind constructed in the usual way, and B represents one of the jamb posts of the window casing.

C, represents a pintle which is secured to the upper part of the jamb post, and D is an eye which is fitted thereon, the eye being attached to the upper part of the blind. The eye D, and pintle C form the upper hinge of the blind.

E represents a curved rod or bar which is secured to the lower part of the blind. This bar is curved as shown clearly in Fig. 1, its lower end being curved upward and out-

ward from the blind and in the same plane with it, the curvature forming a semi-circle or approximating thereto. On the lower end of the rod E a worm wheel F is keyed.

G represents a rod or arbor which passes transversely through the jamb post B. The end of this rod at the inner side of the jamb post has a knob H attached, and the opposite end has a plate I attached, the outer or face side of which is provided with spiral or involute flanches (a) as shown clearly in Fig. 4. The plate I is fitted in a circular recess in the jamb post, but the flanches (a) project beyond its surface, and when the plate I is rotated gear successively into the worm wheel F, each flanch catching between the teeth just before its predecessor leaves them. The rotation of the plate I consequently will rotate the worm wheel F and open and close the blind A.

The wheel F has a hub or boss (c) at its center, said hub or boss resting or bearing on the lower surface of a shell J, which is attached to the jamb post B. The rod E passes up through the bottom of the shell J, and the wheel F is secured to it by a key or pin. The shell J is constructed of metal cast or formed of a single piece and secured to the jamb post B by screw (d), the inner part of the shell being so formed as to cover the plate F. Both the worm wheel and flanché plate therefore will be protected from the weather and also protected from dust and they will not be worn or cut in consequence of grit adhering to the teeth and flanches of the gearing. The blind or shutter also will be retained or secured at any desired point either in an open or closed state or at any intermediate point.

We are aware that a worm wheel and screw have been used for a similar purpose, but the operation of the screw is rather slow, and if a quick threaded screw is employed considerable power is required to operate it. Our device operates the blind quickly, and not much power is required to operate it, as but little friction is created by the working parts.

Having thus described our invention what we claim as new and desire to secure by Letters Patent is,

1. Operating the blind A by means of the worm wheel F and flanché plate I arranged and applied to the blind and jamb post substantially as shown for the purpose specified.

2. We further claim attaching the worm wheel F to the rod E which is secured to the lower part of the blind and curved as shown, whereby the gearing or wheel F and flanged plate I or any other device gearing into wheel F, may be perfectly protected from the weather and dust, in consequence of the rod E passing through the under side of the shell J, as described.

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WILLIAM MASON.

Witnesses:

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