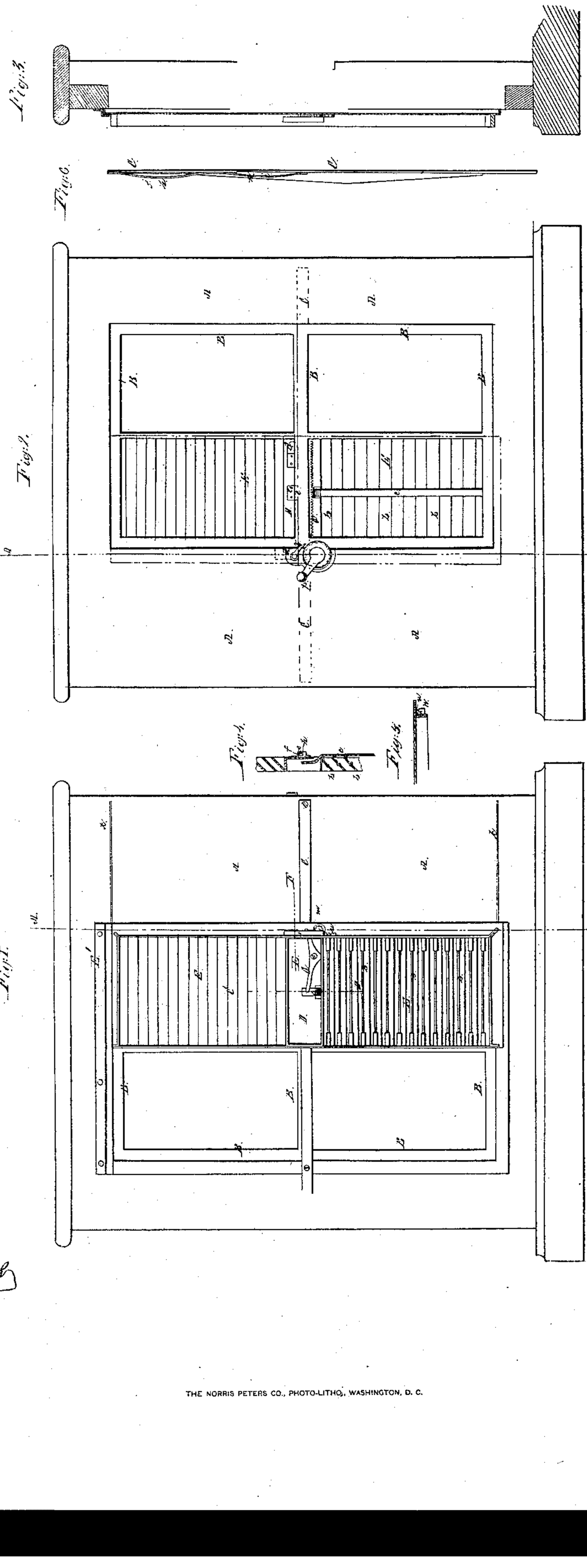
W. H. BROWN.

OPENING AND CLOSING IRON BLINDS OR SHUTTERS.

No. 41,676. Patented Feb. 23, 1864.



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IMPROVEMENT IN OPENING AND CLOSING IRON BLINDS OR SHUTTERS.

Specification forming part of Letters Patent No. **41,676**, dated February 23, 1864.

To all whom it may concern:

Be it known that I, WILLIAM H. BROWN, of the city and county of Worcester, and State of Massachusetts, have invented certain new and useful improvements in the mode of opening and closing iron and other blinds or shutters and the slats thereof; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a front view of one section of a blind in position, with the front central part of the casing removed to expose the lever by which the slats are opened and closed. Fig. 2 represents a rear or back view of the same blind. Fig. 3 represents a section on lines A B, Figs. 1 and 2. Fig. 4 represents a section of a part of the blind on line C D, Fig. 1. Fig. 5 represents a central section of the blind only on line E F, Fig. 1; and Fig. 6 represents a top or plan view of the central supporting-bar, C, with its spring for keeping the blind from rattling.

In the drawings, A A A A represent the wall of the building, and B B B B the window-frame.

A strong iron bar, C, is fastened to the outside of the building and across the center of the window, or thereabout, as clearly indicated in the drawings.

Against the bottom of bar C is fitted to work the top of the rack-bar *a*, which is securely fastened to the inside of the central part, D, of the blind E, which is provided with hinged slats *b b b* on its lower half, the same being connected on the inside by means of a connecting-rod, *c*, whereby as said rod *c* is raised or depressed the slats *b* will be closed or opened as is usual in blinds having hinged slats.

The weight of the blind is sustained by two rollers, *d d*, which revolve on bearings fastened to the central part, D, of the blind. These rollers *d d* rest upon and run on top of the bar C, and are retained in proper position by a lip, *e*, from the blind, which projects over and down on the inside of bar C, which should be so made and applied to the wall as to leave a space between its top flange or edge, *f*, and the wall or side of the building.

A spring, *h*, is fastened to the inside of the bar C, as indicated in Fig. 6, whereby when the blind is closed the lip *e* will bear against and compress the curved part *i* of spring *h*, which prevents rattling. The same result is obtained when the blind is open by the part *j* of spring *h*.

Iron rods *k k*, fastened to the walls, serve to keep the top and bottom of the blind from rubbing against and marring the wall while being opened and closed.

The stationary shield E′ prevents water from running in over the top of the blind, and at the same time serves to keep the blind in position. The blinds may be made in two parts, and each half slide in opposite directions, or the blind may be made whole, so as to cover the entire window, just as the constructer may prefer.

The blind is opened and closed from the inside of the building by means of the small pinion or gear *m*, taking into rack-bar *a*, the former being fastened to the outer end of shaft *n*, which extends through the wall or window-casing into the inside of the building, where it is provided with a ratchet-wheel, *o*, and a handle, *p*.

Gear *m* is kept in position to act upon the rack-bar *a* by means of a spring, *y*, placed between the ratchet-wheel *o* and the face *s* of the bearing-tube F, which supports the shaft *n*.

It will thus be seen that a person upon the inside can open or close the blind in a very expeditious manner, and that, too, without opening the window.

After the blind has been closed, by dropping pawl *t* upon the ratchet-wheel *o* the blind is locked, and cannot be opened from the outside. Again, after the blind has been closed the slats *b* may be opened or closed, as follows: The operator bears against shaft *n*, thereby forcing it outward, whereby its gear *m* will take into the vertical rack-bar *u*, into a slot or notch in the side of which one end of lever G fits, while its other end is pivoted to the connecting-rod *c*, to which all of the hinged slats to be operated are in turn hinged. Now, if gear *m* is revolved while in this position, lever G will be operated upon, and consequently the slats can be either closed or opened, and as soon as the operation is performed and the pressure on shaft *n* removed, spring *y* forces shaft *n* and its gear *m* back into proper position to open and close the blind.

The rack-bar *u* is retained in proper posi-

tion by means of a guide-piece, *w*, fastened to the blind. In the drawings the slats of only one-half of a section of a blind are represented as hinged, since they are all sufficient to illustrate the principle of my invention in relation thereto.

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

1. The combination, with a sliding blind, of the slats *b*, connecting-rod *c*, lever G, rack-bar *u*, and sliding shaft *n*, with its gear *m*, arranged and operating together substantially as and for the purpose set forth.

2. The combination, with a sliding blind, of the lip *e*, spring *j*, ratchet-wheel *o*, and pawl *t*, for the purposes stated.

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