



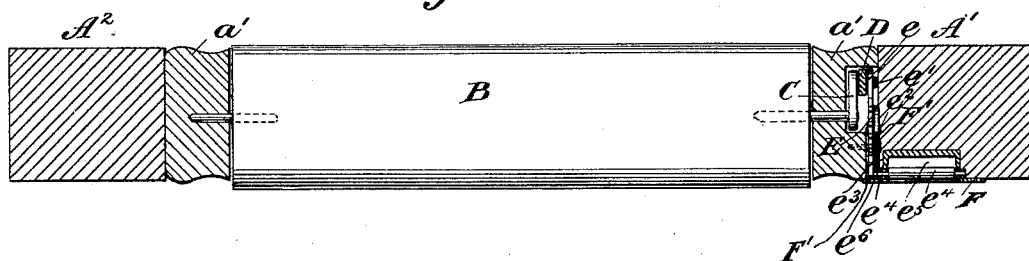
J. CABUS.

WINDOW BLIND OR SHUTTER.

No. 422,068.

Patented Feb. 25, 1890.

*Fig. 6.*



*Witnesses:-*  
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# UNITED STATES PATENT OFFICE.

JOSEPH CABUS, OF NEW YORK, N. Y.

## WINDOW BLIND OR SHUTTER.

SPECIFICATION forming part of Letters Patent No. 422,068, dated February 25, 1890.

Application filed November 19, 1889. Serial No. 330,864. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH CABUS, of the city and county of New York, in the State of New York, have invented a certain new and useful Improvement in Window Blinds or Shutters, of which the following is a specification.

I will describe in detail a window-blind embodying my improvement, and then point out the novel features in a claim.

In the accompanying drawings, Figure 1 is a face view of a window-blind embodying my improvement. Fig. 2 is an end view of the same, one of the sides of the frame being removed and showing the slats in a closed position. Fig. 3 is a view similar to Fig. 2, but showing the slats in a wholly-open position. Fig. 4 is a view similar to Figs. 2 and 3, but showing the slats in a closed position, the converse of that shown in Fig. 2. Fig. 5 is a cross-section taken on the line  $x x$ , Fig. 1. Fig. 6 is a detail view on an enlarged scale and partly in section, the section being taken on the line  $y y$ , Fig. 1.

Similar letters of reference designate corresponding parts in all the figures.

The frame of the blind consists of upper cross-pieces A, and side or end pieces A'. The cross-pieces A of the frame are provided in the example shown with dowel-heads  $a$ , as shown more clearly in dotted outline in Fig. 1, which dowel-heads extend into suitable dowels in the side or end piece A'. When thus secured together, screws may also be employed to permanently prevent the disconnection of the parts. Secured to the inner edges of the portions A A' A' of the frame is a bead  $a'$ . Such beading constitutes in effect a portion of the frame. Adjacent to the portion A' of the frame said beading is provided with a longitudinal groove  $a^2$ , as shown more clearly in Figs. 2, 3, 4, and 5.

B designates slats of which there may be any desired number. These slats are pivoted at both their ends in the side portions of the beading  $a'$ . The portions of the pivots of said slats which extend into the groove  $a^2$  have rigidly secured to them cranks C. Each of the cranks C is connected to a longitudinally-movable bar D by a loose connection. It will be readily seen that when by this arrange-

ment a longitudinal movement is imparted to the bar the latter will, through the operation of the cranks C, cause the rocking of the slats upon their pivots to open or close said slats to any desired extent and in either of two directions.

I have shown the slats as closed in one direction in Fig. 2 and in the other direction in Fig. 4. In the former figure the bar is brought downwardly to close the slats and in the latter it is elevated.

I have shown means for imparting longitudinal movement to the bar D, consisting of a pinion E, which pinion bears upon one side a slotted link  $e$ , engaging a pin  $e'$ , shown as forming part of one of the cranks C. Said pinion is journaled upon a stud  $e^2$ , extending from a plate F', secured upon the beading  $a'$ . The plate F' is secured to the beading, as shown, by screws and incloses one side of a recess formed in the beading, in which recess are arranged a rack  $e^3$  and a portion of the pinion E. Rotary motion is imparted to the pinion E by means of the rack  $e^3$ , which rack has connected to it a hand-piece  $e^4$ , extending at approximate right angles from said rack and into a recess  $e^5$ , formed in a plate F, which plate is secured upon the portion A' of the frame. The recess  $e^5$  is of such depth that the hand-piece  $e^4$  may be grasped by hand and be moved up and down within the recess  $e^5$ . The plate F', upon its side nearer the plate F, is provided with a vertical slot  $e^6$  to admit of the passage of the hand-piece through it. Such movement of the hand-piece causes a longitudinal movement of the rack, which imparts a rotary motion of the pinion through which a longitudinal movement is given to the bar, whereby the slats will be moved in different positions.

It is to be understood that in the present example of my improvement the plate F is sunk into the portion A' of the frame, so that the plate and the hand-piece  $e^4$  will be flush or substantially flush with the face of the portion A' of the frame. This admits of the portion A' being hinged to the window-frame, and no obstruction will be offered by the plate F or the hand-piece  $e^4$  in the complete closing of the blind or window.

It will be observed that by my improvement

all the mechanism for operating the slats except the hand-piece  $e^4$  is wholly concealed, and it will also be seen that if any accident should happen to the mechanism for operating the slats it is only necessary to remove the portion A' of the frame in order to bring all said mechanism into view.

What I claim as my invention, and desire to secure by Letters Patent, is—

10 The combination, with a frame, of slats pivoted in said frame, a movable bar having a crank-connection with all said slats, a pinion having a loose connection with said bar, a rack

engaging said pinion, and a hand-piece substantially flush with the face of said frame, said hand-piece, rack, and pinion being adapted to impart longitudinal movement to said bar in order to rock said slats into different positions, all said mechanism, except a portion of the hand-piece, being wholly inclosed within said frame, substantially as specified.

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