(No Model.) 2 Sheets—Sheet 1.

J. WILLIAMS.

WINDOW BLIND.

No. 283,941. Patented Aug. 28, 1883.

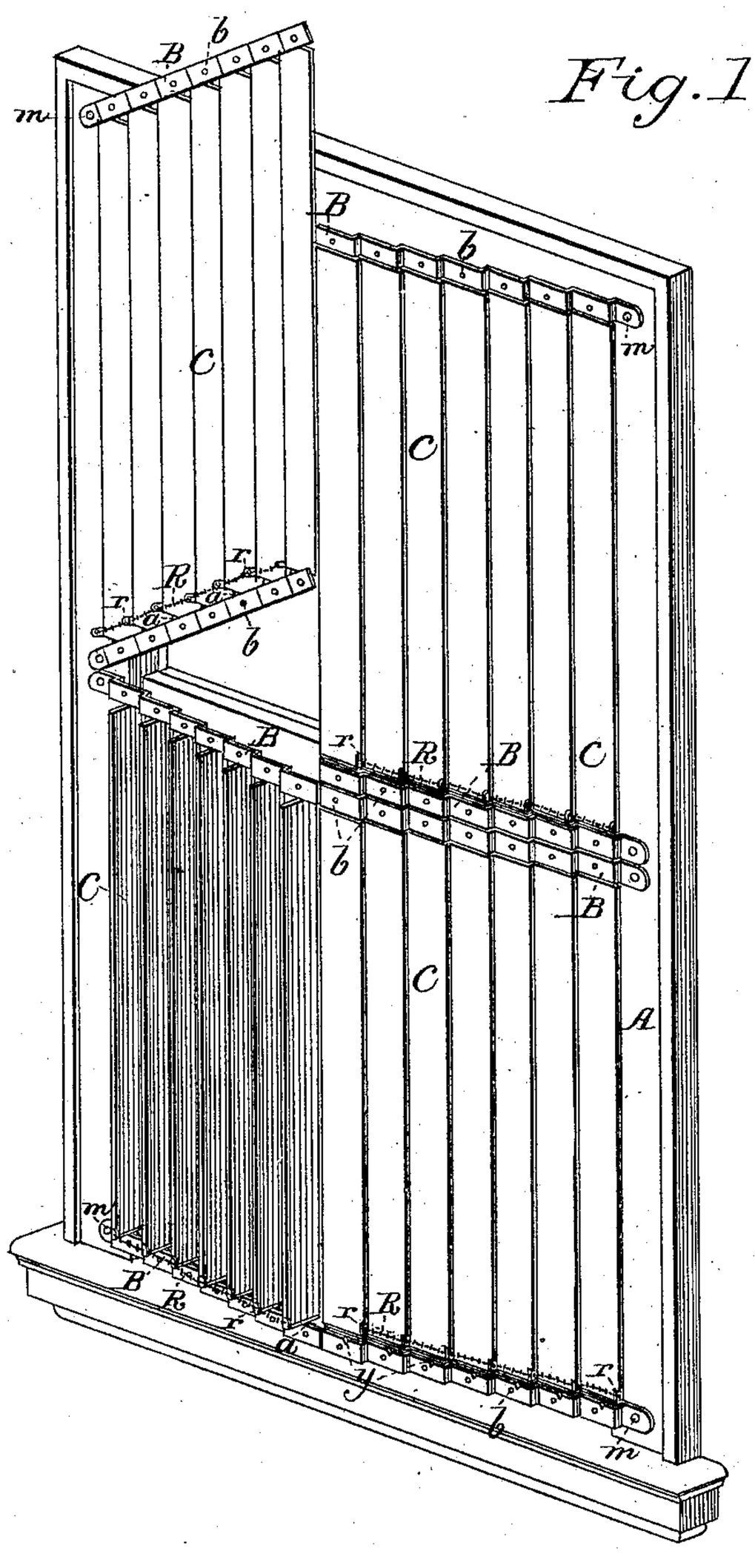

Fig. 1.

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

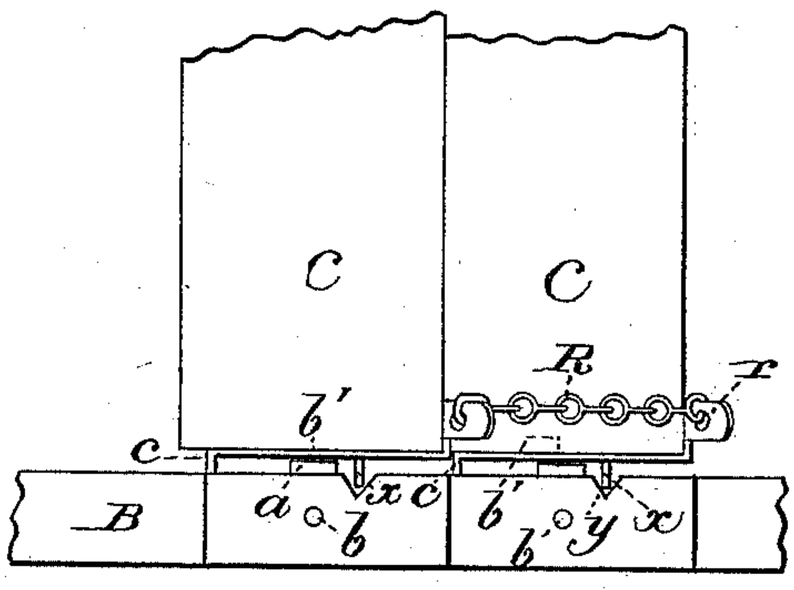


Fig. 3.

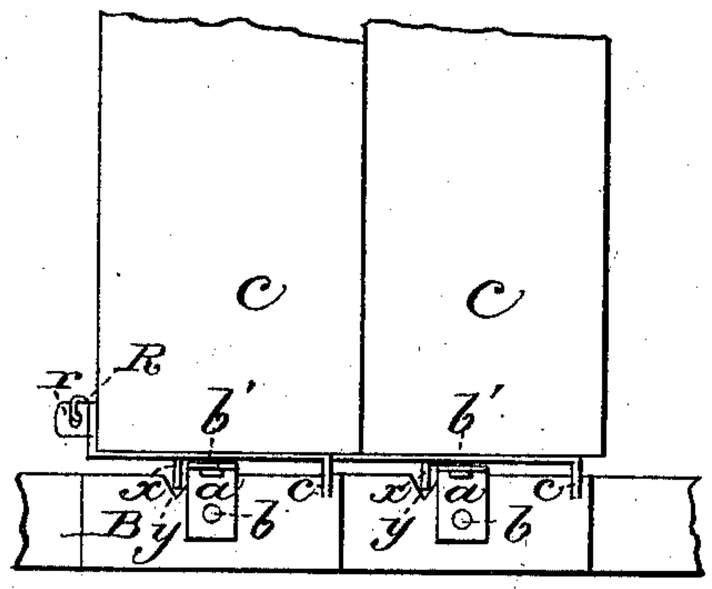


Fig. 4.

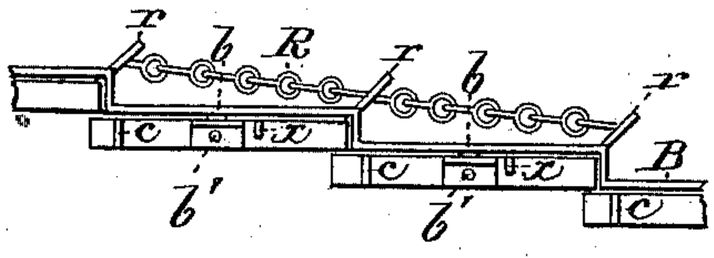
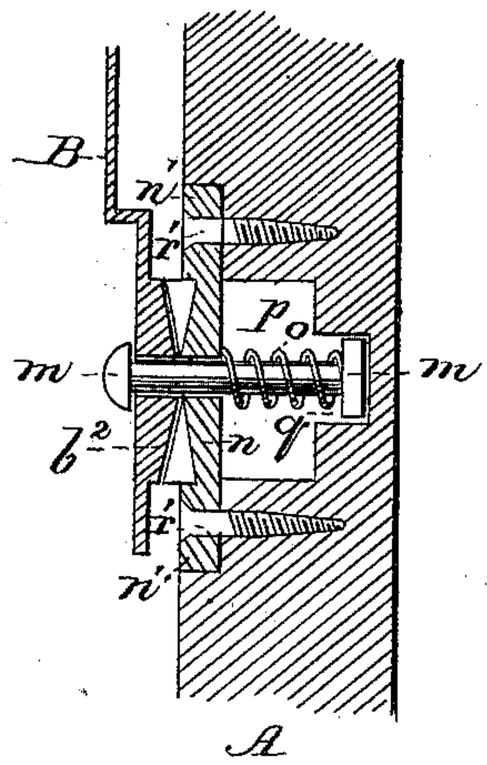


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOSEPH WILLIAMS, OF SAN JOSÉ, CALIFORNIA.

WINDOW-BLIND.

SPECIFICATION forming part of Letters Patent No. 283,941, dated August 28, 1883.

Application filed May 21, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH WILLIAMS, of San José, county of Santa Clara, State of California, have invented an Improved Window-Blind; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to the class of window-blinds, and particularly to certain new and useful improvements in the window-blind secured to me by Letters Patent of the United States No. 275,557, dated April 10, 1883.

These improvements consist in means for pivoting each slat independently to enable it to turn edgewise, in means for so turning them all simultaneously, and in an improved ratchet-hinge in connection with the swinging guides, all of which I shall hereinafter explain, reference being made to the accompanying drawings, in which—

Figure 1, Sheet 1, is a perspective view of my device, showing the slats C of one of the lower blinds turned edgewise and one of the upper blinds partly raised. Fig. 2, Sheet 2, is a front elevation of a portion of a blind. Fig. 3 is a rear elevation of the same. Fig. 4 is a portion of a plan, looking up, of the same. Fig. 5 is a plan of an adjustable hinge.

A is the window-frame. B B are guides pivoted to said frame and bent in treads and risers. C C are the slats consisting of independent strips. In my former patent these slats or strips were pivoted directly to the treads of the guides, in order to allow them to lie on one another when guides were swung up; but they could not turn edgewise, and therefore, in order to see through the window, the whole of one section of the blind had to be opened; but in my improvement I have for each a small angle-plate, *a*. One side of this is pivoted to the tread of the guide at *b*, while the strip C is pivoted on top of its other side at *b'*. The effect of this is to enable the strips to close up as before because of the pivot-connection between the angle-plate *a* and the tread of the guide, while each strip may be turned edgewise, as shown in Fig. 1, because of its own pivot on the angle-plate. In order to prevent the strips from swinging in the wrong direction I have a small stop, *c*, extending downwardly from one edge of the strip and impinging behind the tread of the guide. As a means for turning all the strips simultaneously when desired I have the chain R. This is connected with small projecting plates *r* on the edge of each slat near its base. By drawing upon this chain the strips may be opened or closed all together; but if I desire to so arrange it as to open but a single slat or more, I may attach the chain to the plates *r* of certain slats and leave the others free to open. The small plates *r* serve further as a finger-rest in turning the slats. To prevent the slats from turning past the center when turned edgewise, I have a small pin, *x*, in the base of the slat. This plays through a notch, *y*, in the guides, and by striking said guides when the slat is turned edgewise prevents its further movement. These pins may be placed on any or all of the slats, though when they are all connected by the chain R it need be placed only on the uppermost or inner strip.

In my former patent I showed, as a means for hinging the guides B to the window-frame, a hinge consisting of two ratchet-disks held in engagement by a spring; but in that hinge the force of the spring was exerted against the inner disk to keep it pushed out. I have found that by the following construction I am enabled to put the hinge device in its place with more facility and make a more efficient connection.

In Fig. 5 a recess, *p*, is made in the frame A, and in the back of this recess is made a socket, *q*, in which the nut *m'* of pivot-pin *m* fits, and is adapted to move therein, instead of being held firmly, as heretofore.

The ratchet-disk *n* is let into the window-casing flush, and is secured by small screws *r'*, passing through its ears *n'*. In the former case this disk was loose. The pin *m* passes loosely through it. The ends of the guides B have the ratchet-disks b^2, through which pass the pivot-pins, which are provided with a head, as shown. The spring *o* is around the pivot-pin, and presses against the disk *n* and against the nut *m'* on the inner end of the bolt. The disk *n* being fixed, the effect of the spring is to press the pin *m* in, thus holding the disk b^2 against disk *n*, instead of the reverse, as shown in my former patent. This construction is more effective and allows me to put the hinge in easily, as the pivot-pins can be inserted at any time, as they play loosely in the frame.

Having thus described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

1. In a window-blind, the swinging guides B, bent in treads and risers, as shown, and pivoted or hinged to the window-frame, in combination with the separate independent strips C and pivoted connections between said strips and the treads of the guides, to enable the strips to pass over one another when the guides are moved from a horizontal to a vertical position, and to turn edgewise independently when the guides are in a horizontal position, substantially as herein described.

2. In a window-blind, the swinging guides B, bent in treads and risers, as shown, and pivoted or hinged to the window-frame, in combination with the separate independent strips C and the angle-plates *a*, pivoted to the treads of the guides B and to the ends of the strips C, substantially as and for the purpose herein described.

3. In a window-blind, the swinging guides B, bent in treads and risers, as shown, and pivoted or hinged to the window-frame, in combination with the separate independent strips C, the angle-plates *a*, pivoted to the treads of the guides B and to the ends of the strips C, and the stops *c*, impinging behind the treads of the guides B, substantially as and for the purpose herein described.

4. In a window-blind, the swinging guides B, bent in treads and risers, as shown, and pivoted or hinged to the window-frame, in combination with the slats C, pivoted angle-plates *a*, and the means for turning edgewise all the strips simultaneously, consisting of the chain R, secured to plates *r*, on the edges of each.

5. In a window-blind, the swinging guides B, bent in notched treads and risers, as shown, pivoted or hinged to the window-frame and provided with the pivoted angle-plates *a*, in combination with the means for limiting the turn of the slats, consisting of the pins *x* in the base of the slats, substantially as herein described.

6. In a window-blind, the independent strips C and the bent guides B, to which they are pivoted, as described, said guides having toothed or ratchet disks b^2, in combination with the pivot-pin *m*, passing through disks b^2, and being loose in the window-frame, and ratchet-disk *n*, said ratchet-disk *n* being secured to the frame, and the spring *o*, pressing against the fixed disk *n* and the inner end of the pin *m*, to force said pin in and hold the ratchet-disk b^2 in engagement with the disk *n*, substantially as herein described.

In witness whereof I have hereunto set my hand.

JOSEPH WILLIAMS.

Witnesses:
WM. F. BOOTH,
S. H. NOURSE.