

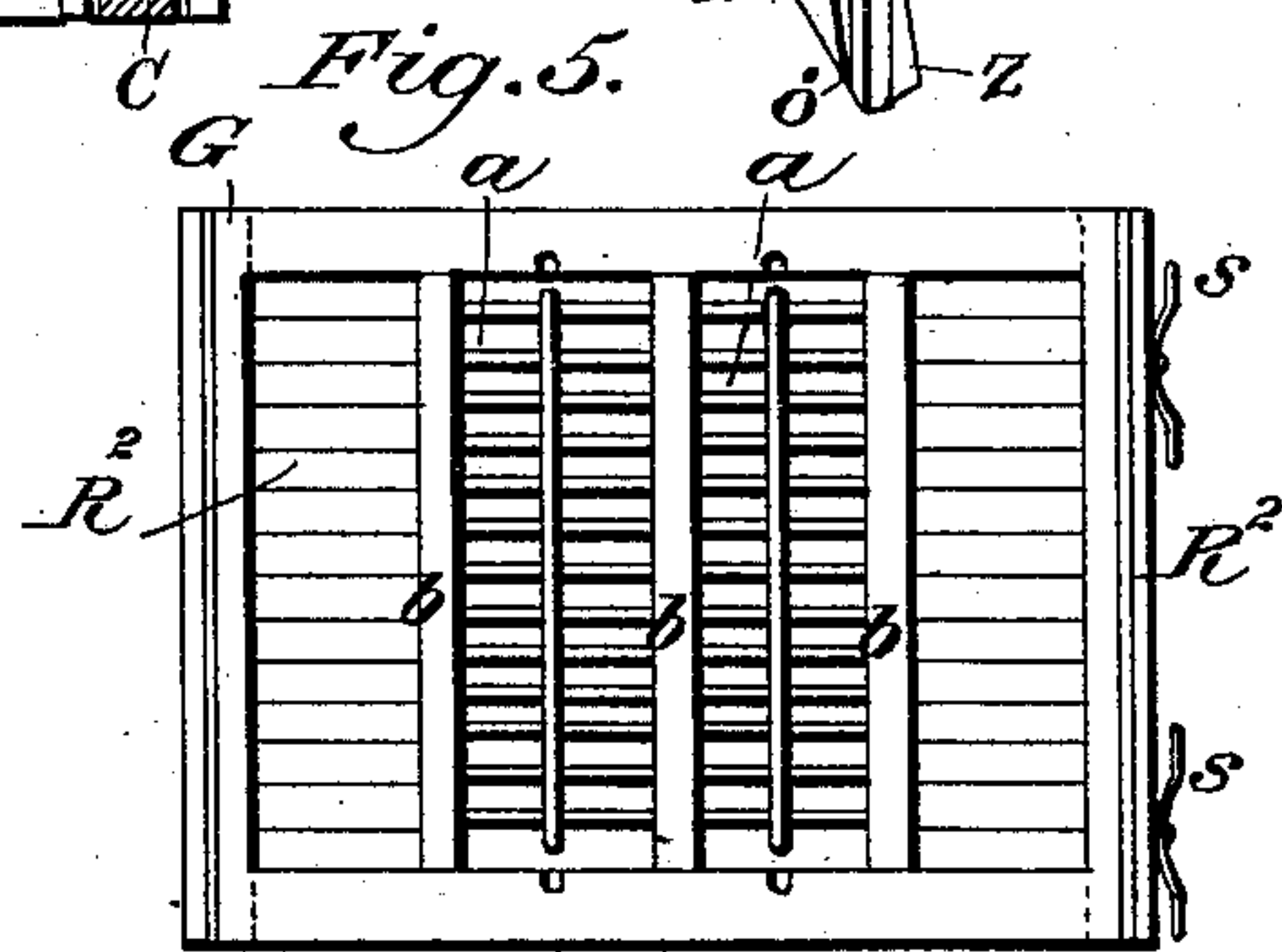
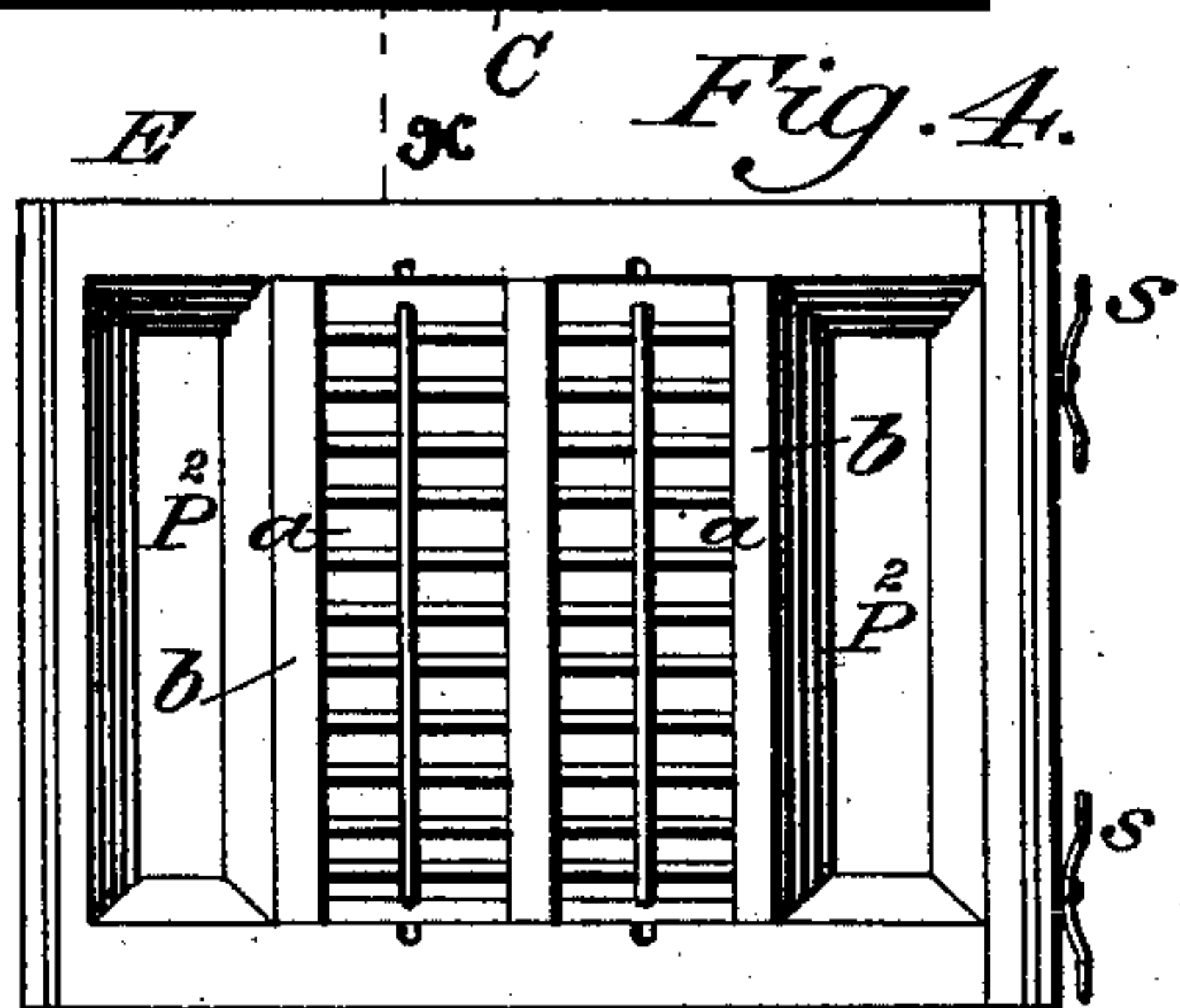
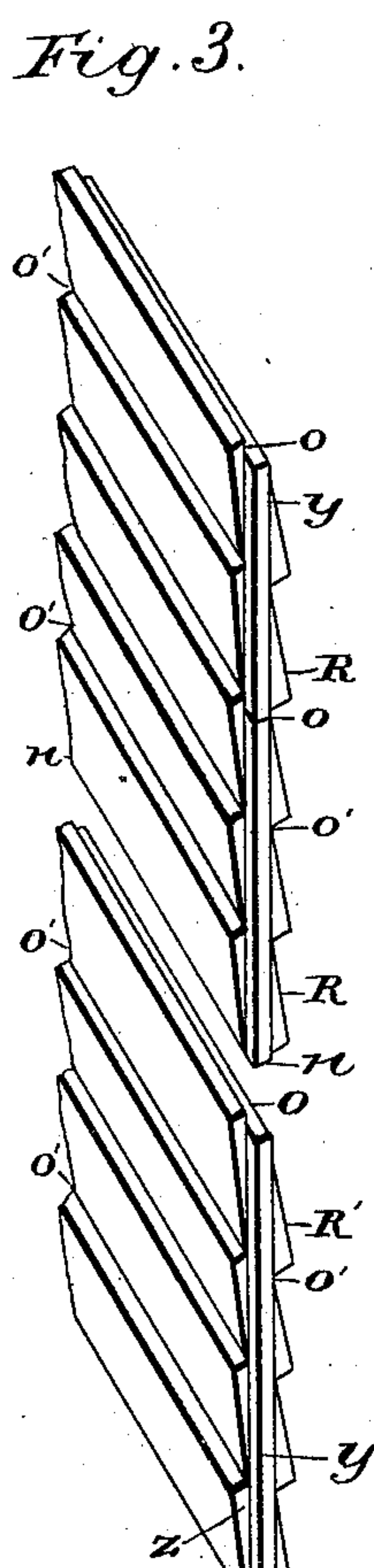
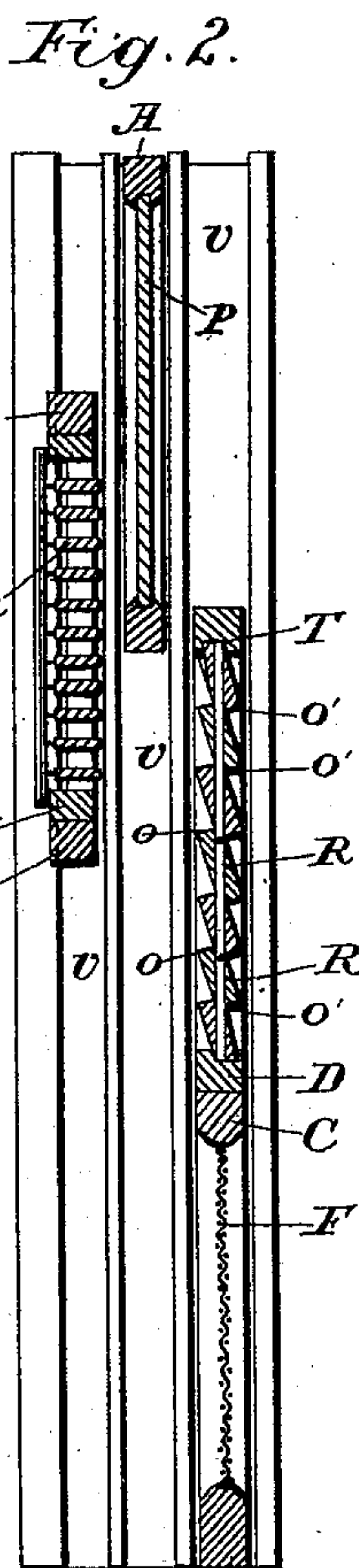
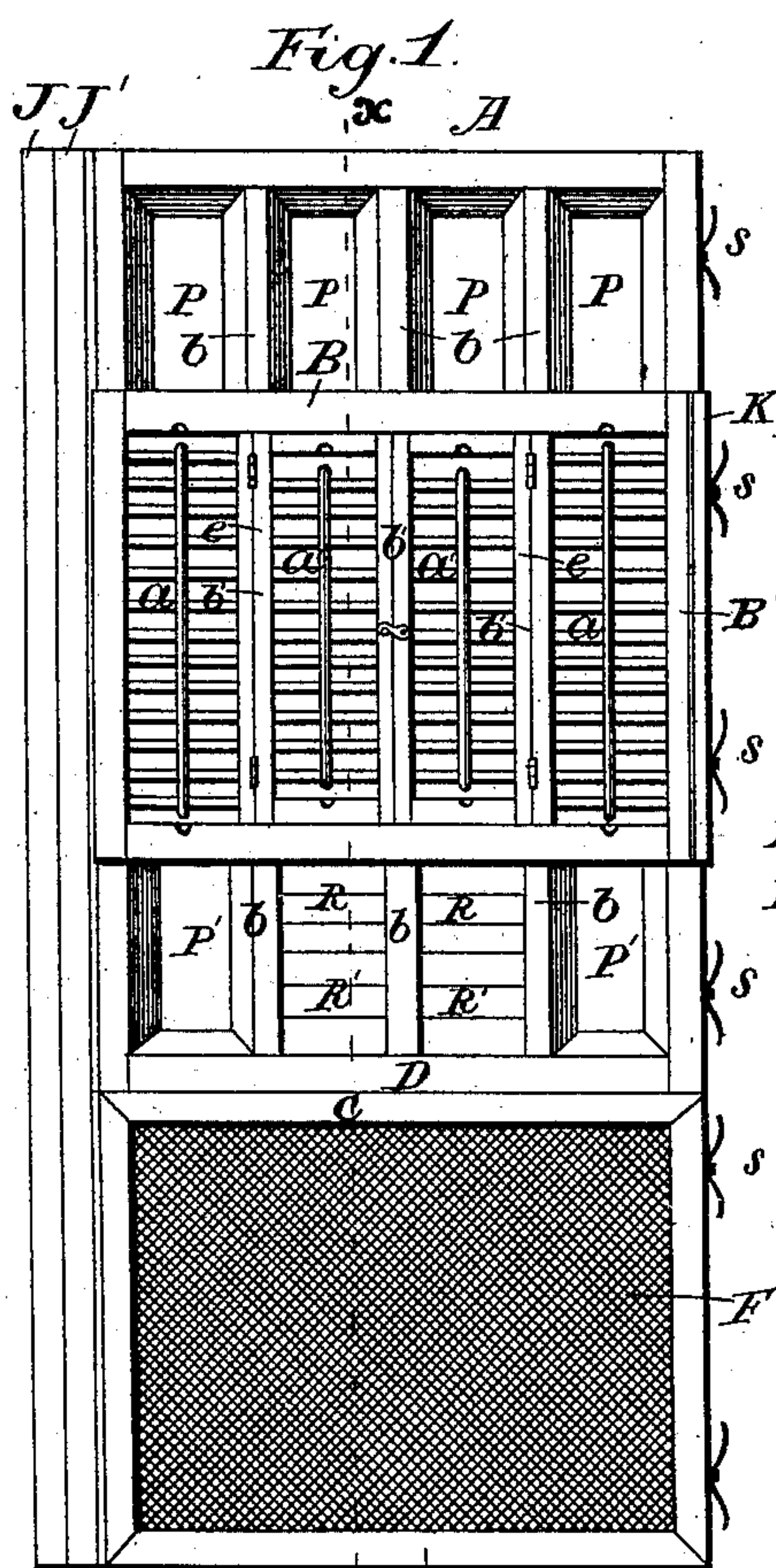
(No Model.)

J. B. HARTMAN.

WINDOW BLIND.

No. 373,067.

Patented Nov. 15, 1887.



Witnesses:

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# UNITED STATES PATENT OFFICE.

JACOB B. HARTMAN, OF WOOSTER, OHIO.

## WINDOW-BLIND.

SPECIFICATION forming part of Letters Patent No. 373,067, dated November 15, 1887.

Application filed February 7, 1885. Serial No. 155,268. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB B. HARTMAN, a citizen of the United States, residing at Wooster, in the county of Wayne and State of Ohio, have invented a new and useful Window-Blind, of which the following is a specification.

My invention relates to improvements in inside window-blinds which slide up and down along guiding-grooves in or upon the jambs of a window inside of the sashes; and it consists, first, of the novel arrangement of the several panels within the sliding section-frames; second, of the novel construction of a series of blind-slats constituting the whole or part of a panel formed of one piece and shaped on one or both sides to imitate independent blind-slats; third, of the novel construction of hinged panel frames or divisions within the sliding frame of any section of such blinds; fourth, of the combination, with such series of sliding blind-sections, of a window-screen section adapted to operate as an independent sliding section either in connection with or as a substitute for any one of the several blind-sections.

My invention is illustrated by the accompanying drawings, in which—

Figure 1 is a front view of a portion of my improved blinds, showing one of the grooved jambs and three of the series of blind-sections and also the window-screen in position. Fig. 2 is a vertical longitudinal section of the same on line *x x*. Figs. 1 and 2 further show my improved hinged panels or divisions within the frame of a section of the blinds. Fig. 3 shows my improved method of constructing stationary blind-slats. Figs. 4 and 5 illustrate detached blind-sections having my novel combination of panels within the section-frame, hereinafter described.

Referring to the drawings, *c* are the jambs of an ordinary window-frame, provided with a series of vertical grooves, *v*, to receive and guide the several blind-sections.

A B D E G represent a series of sliding blind-sections such as I use. They are each provided with a similar sliding frame having muntins *b*, according to the number of panels or divisions required, within the frame, and may be interchangeably used in any of the series of guiding-grooves *v* or in any part of the window-frame.

A represents a section-frame having muntins *b* and provided with solid wood panels *P* throughout; and this I do not claim.

B illustrates a section-frame having muntins *b* and rolling slats *a*, pivoted in the muntins and frame in the usual way. Within this frame are also shown my independent panel-frames *e*, which are hinged upon the muntins *b*<sup>2</sup> and swing within the frame.

The frames and muntins of the several sections being alike, it is apparent such hinged panel-frames may be used with any one or all of them. It is also apparent that such panels may be used in combination with any one or more of the several kinds of panels employed in the blinds. The panel or space within such hinged panel-frame may be filled with slats, as shown at *a*, or with glass or panels of any other material or form desired. I am aware that inside blinds hung on hinges are not new, and I do not claim such, broadly.

My improvement consists in hinging one or more independent panel-frames, *e*, having suitable panels, as aforesaid, upon a sliding blind-section, instead of hinging the same upon the window-frame, as heretofore.

D illustrates a sliding blind-section frame provided with muntins *b*, in which solid panels *P*<sup>1</sup>, of wood, glass, or the like, and stationary-slat panels *R*<sup>2</sup> are combined. The inner edges of the muntins and frame are grooved to receive and secure the adjacent edges of the panels *P*<sup>1</sup> and *R*, respectively, the edges of the panels being fitted to enter the grooves of the muntins and frame, preferably as shown, Fig. 2. The number and arrangement of the several panels within the frame may of course be varied.

E illustrates a sliding section-frame, in which rolling-slat panels *a* and solid panels of wood or other suitable material are combined. This frame is also provided with muntins *b*, according to the number of panels required. The inner edges of the muntins and frame are grooved to receive and secure the adjacent edges of the solid panels, or bored, as the case may require, to receive the pivoted ends of the series of rolling slats, in the usual way. The number and arrangement of these several panels within the frame may of course be varied according to taste.



I am aware that inside blinds having part of the panels closed and part of rolling slats have been heretofore used in connection with frames hinged upon the window-jambs; also, that such construction has been used in laterally-sliding inside blinds; and I do not claim such, broadly. My invention as to this consists in the construction of a vertically-sliding frame, E, provided with one or more muntins forming a solid frame across the window, the muntins and frame fitted to receive and secure one or more panels of rolling slats and one or more solid panels. Heretofore in such blinds rolling slats could only be used in a section-frame filled entirely with such panels, the frame and muntins being specially adapted thereto and not adapted to a combination of both. My invention combines such panels in the common vertically-sliding frame, thereby adding diversity and beauty to the series.

G illustrates a sliding section-frame in which one or more panels of stationary slats, R<sup>2</sup>, and one or more panels of rolling slats, a, are combined. This frame is, in like manner with the rest of the series, provided with muntins b corresponding with the number of panels required. The edges of the muntins and frame adjacent to the stationary-slat panels are grooved to receive the end tenons of the slats and the upper and lower ends of the panel, and the edges of the frame and muntins are bored to receive the pivoted ends of the rolling slats for such panels in the usual way. The number and arrangement of these panels within the common frame may, in like manner with the other sections, be varied at pleasure.

Thus it will be seen that, the frames and muntins of the several sections being alike, the different forms of panels may be readily combined within any of the section-frames and the several sections be interchangeably used or removed at pleasure, thereby giving to the series of sliding sections a pleasing variety without increasing cost of manufacture.

When the frames of any of the sections are thicker than the width of the guiding-grooves v, the vertical edges of the same may be rabbeted so as to provide a tongue, k, of the desired thickness to slide in the grooves.

R R', Fig. 3, show my improved stationary slats. Heretofore such slats have been constructed singly. My improvement consists in making two or more slats, or an entire panel if desired, of a single piece shaped to imitate detached blind-slats. This I accomplish by cutting a series of parallel grooves, o', in the surface of the board or panel, so as to give it the appearance of a series of independent slats. The lateral ends of such series of slats may be provided with a suitable tongue, y, fitted to enter the corresponding grooves in the muntins and frame of the section. Where two of such series of slats are united in a panel, the longitudinal edge of one series may be provided with a longitudinal furrow, o, to receive the longitudinal edge u of the next ad-

jacent series, as in the case of single slats heretofore. Such slats may be set in the frame at any angle—that is, horizontally, diagonally, or vertically—as may be preferred.

In combination with such series of sliding blinds I use a sliding screen, F, stretched upon a frame, C, similar in form to the blind-section frames, and, like them, adapted to slide in any of the series of guiding-grooves v, either in connection with or as a substitute for any one of the series of blind-sections. It is supported in any desired position in the guiding-grooves v by friction-springs s, the same as the several blind-sections, and, like them, may be readily interchanged or removed from the window-frame.

I am aware that the use of a screen in connection with inside blinds is not new, and I do not claim such, broadly. My invention consists in the construction and use of a window-screen provided with a screen-frame adapted to slide in any of the series of grooves v independently of the several blind-sections, having supporting-springs s, so as to be used either in addition to or as a substitute for any one of the series of blind-sections without the use of clamps or other fastenings, as heretofore used, to secure it to the blind-frame.

I am aware that detachable screen-frames have been before used in connection with a sliding blind for car-windows, and also in connection with blinds hinged upon the window-jambs. My invention relates to a vertically-sliding screen-frame in combination with a series of vertically-sliding inside blinds. Heretofore such screen-frames have been secured in vertical grooves in the parting-strips and have been held in an elevated position by means of clamps to secure the frame to the blind-frame. My improvement consists in providing a screen-frame similar to the section-frames of the series, constructed to slide vertically along any of the series of grooves which secure the several section-frames and entirely independent of the several blind-sections, so the screen may be placed at will in any part of the window-frame and be there supported by friction-springs without the use of clamps, the same as the several blind-sections are secured in the window-frame.

Having thus fully described my invention, what I claim is—

1. In a window-blind formed of several sections of sliding blinds, a blind-section constructed with a sliding frame, D, having one or more muntins, b, in combination with one or more solid panels, P', and one or more panels of stationary slats, R, the panels and slats secured in grooves in the adjacent edges of the muntins and frame, substantially as set forth.

2. In a sliding blind-section constructed with a sliding frame, G, having one or more muntins, b, the combination of one or more panels of stationary slats, R<sup>2</sup>, and one or more panels of rolling slats, a, the stationary slats secured in grooves and the rolling slats se-



cured by pivots in the adjacent edges of the muntins and frame, respectively, substantially as set forth.

3. In a sliding blind-section, the combination with a sliding frame, B, having one or more muntins, *b'*, of one or more independent panel-frames, *e*, provided with suitable panels within the same, and fitted to swing within the sliding frame upon hinges attached to the muntins or frame, substantially as set forth.

4. In a window-blind, a series of blind-slats, constituting a whole or part of a panel formed

of a single piece shaped to imitate detachable blind-slats, substantially as set forth. 15

5. In a window-blind, a series of blind-slats, R, formed of a single piece shaped on one or both sides to imitate independent blind-slats, and provided with vertical end tenons *y*, and having overlapping longitudinal edges, substantially as set forth. 20

Witness my hand.

JACOB B. HARTMAN.

Witnesses:

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LUCAS FLATTERY.