

(No Model.)

E. HANTSCHE, Jr.

WINDOW BLIND.

No. 421,047.

Patented Feb. 11, 1890.

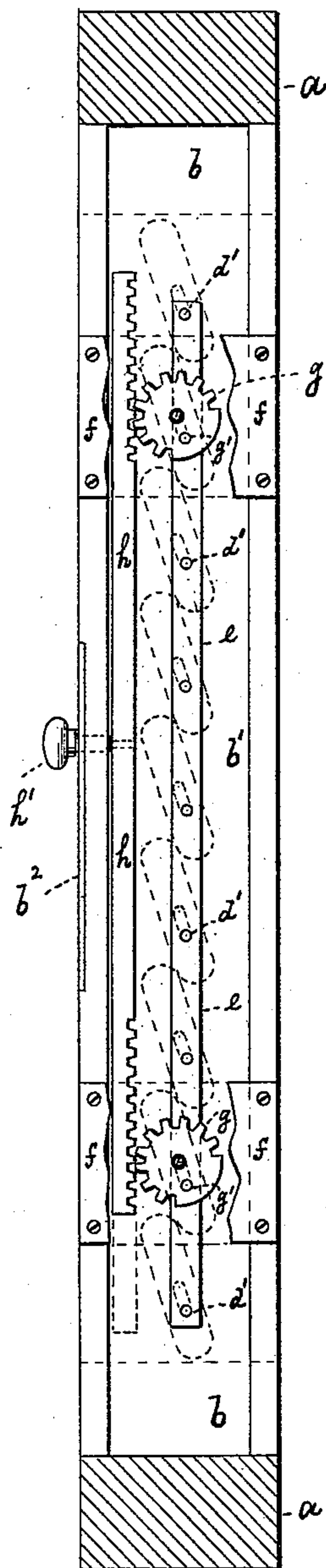


FIG. 2

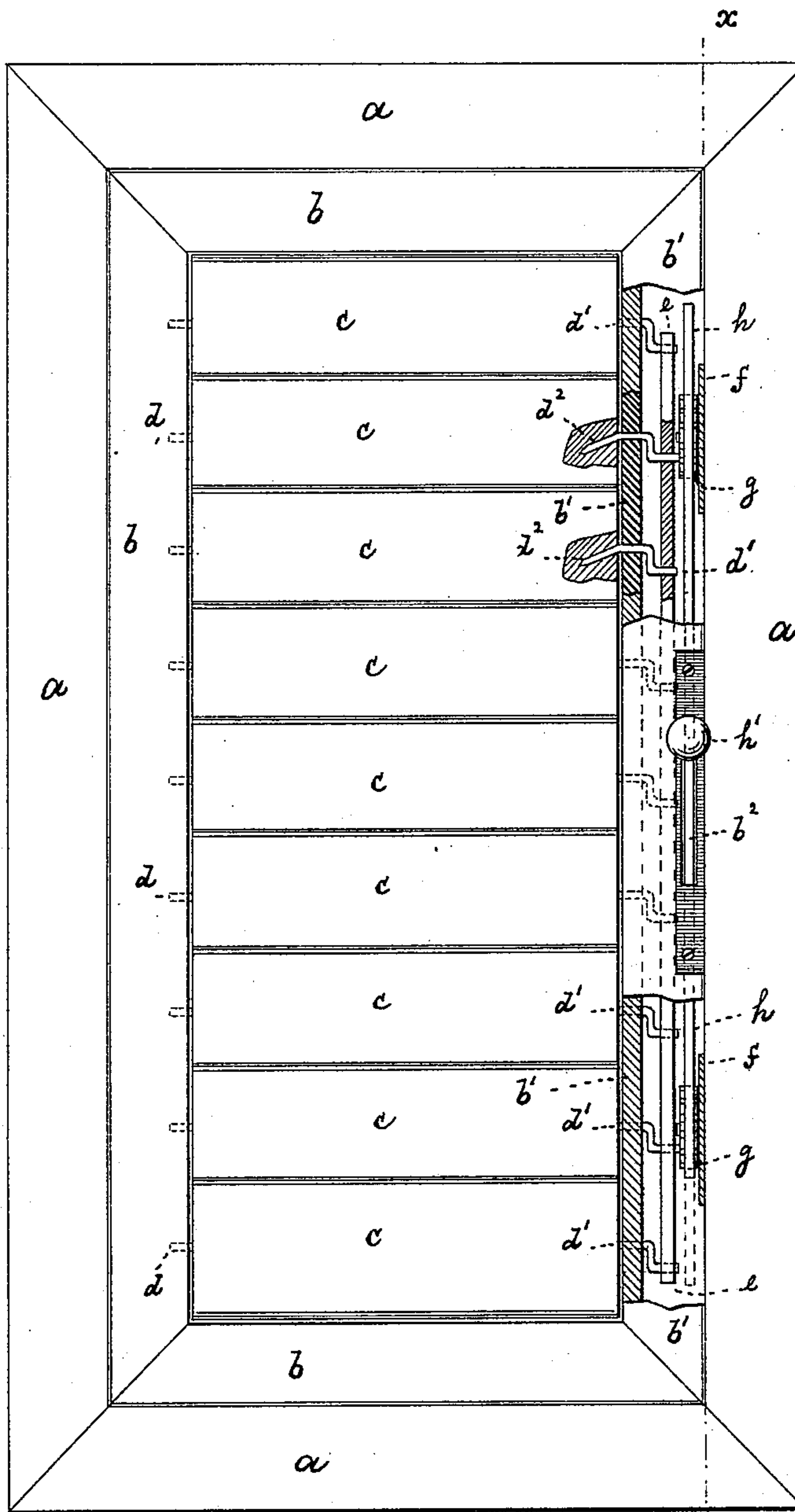


FIG. 1

WITNESSES

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INVENTOR

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UNITED STATES PATENT OFFICE.

EMIL HANTSCHÉ, JR., OF NEW YORK, N. Y.

WINDOW-BLIND.

SPECIFICATION forming part of Letters Patent No. 421,047, dated February 11, 1890.

Application filed November 30, 1889. Serial No. 332,083. (No model.)

To all whom it may concern:

Be it known that I, EMIL HANTSCHÉ, Jr., of New York city, New York, have invented an Improved Window-Blind, of which the following is a specification.

This invention relates to a window-blind of the kind in which the rod which connects and operates the slats is concealed within the blind-frame.

The invention consists in the various features of improvement, more fully pointed out in the claim.

In the accompanying drawings, Figure 1 is a sectional face view of my improved blind. Fig. 2 is a vertical section on the line xx , Fig. 1.

The letter a represents an outer frame which I prefer to use and into which fits an inner frame b . One of the stiles b' of this frame is slotted lengthwise to carry the slat-operating mechanism. c c are the slats, pivoted within frame b . The pivots d at one end of the slats are of the ordinary straight form; but the pivots d' , that enter the slotted stile b' , are crank-shaped, as shown—that is to say, the pivots d' pass with their shanks through the stile, and are then bent twice at right angles within the slot of the stile. The upper straight ends of the pivots d' are connected by a perforated bar e , concealed within the slotted stile, each perforation engaging one of the pivots, so that the motion of the bar will uniformly operate all the slats. Across the slotted stile b' there is secured, near each end thereof, a plate f , by screws or otherwise. To these plates are pivoted toothed wheels g . These toothed wheels are perforated, as at g' , to receive each the end of one of the pivots

d' , these pivots being made slightly longer than the rest. The toothed wheels g are engaged by a rack h , free to be moved up or down by a button h' , projecting outwardly through a slot b^2 of the stile b' . It will be seen that by moving the button up or down the rack will revolve the toothed wheels, and the latter will in turn revolve the two slats with which they are connected. This motion is by the perforated bar e transmitted to all the slats of the blind to open or close the same.

By using a pair of toothed wheels—one near the top and one near the bottom of the blind—I drive the entire series of slats positively and without unduly straining any of the parts.

I prefer to bend the inner ends d^2 of the pivots d' to a slight extent where they enter the slats c . As these pivots have to bear the entire working strain, they would be apt to work loose in their seats when made perfectly straight. This difficulty is overcome by bending them in the manner indicated.

What I claim is—

The combination of a blind-frame having a slotted stile with slats c , crank-shaped pivots d' , upon which the slats turn and which enter the slot in the stile, a perforated bar connecting the pivots d' , a pair of toothed wheels engaging a pair of said pivots, and a rack engaging the toothed wheels, substantially as specified.

EMIL HANTSCHÉ, JR.

Witnesses:

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