

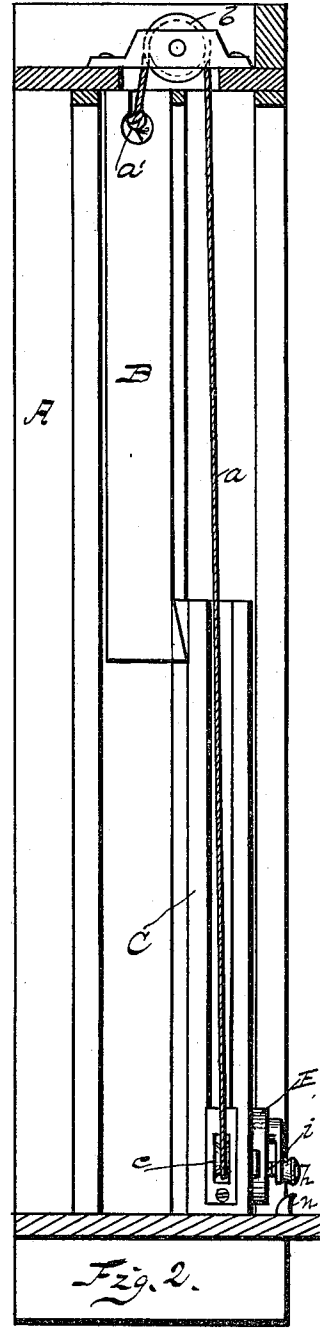
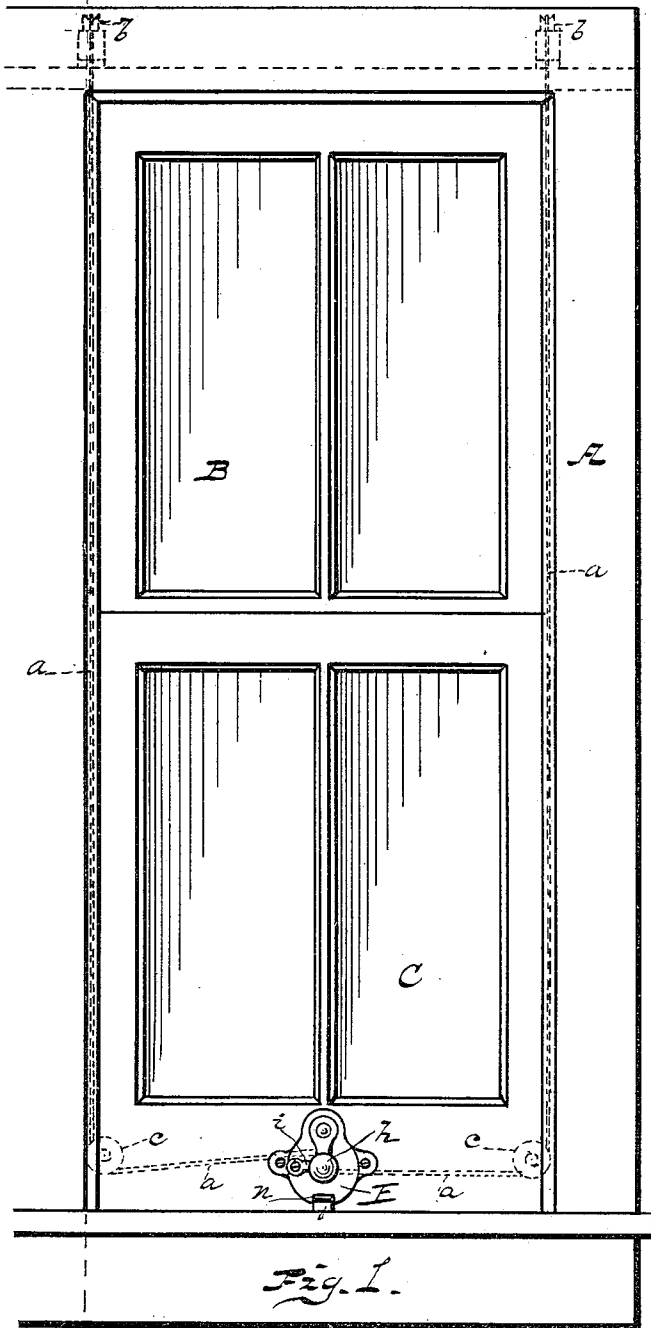
(No Model.)

2 Sheets—Sheet 1.

J. D. HESS.
SASH BALANCE.

No. 360.297.

Patented Mar. 29, 1887.



WITNESSES
for B. Clarke
Frank Reynolds.

INVENTOR.
J. D. Hess.
by E. K. Bates
his Attorney

(No Model.)

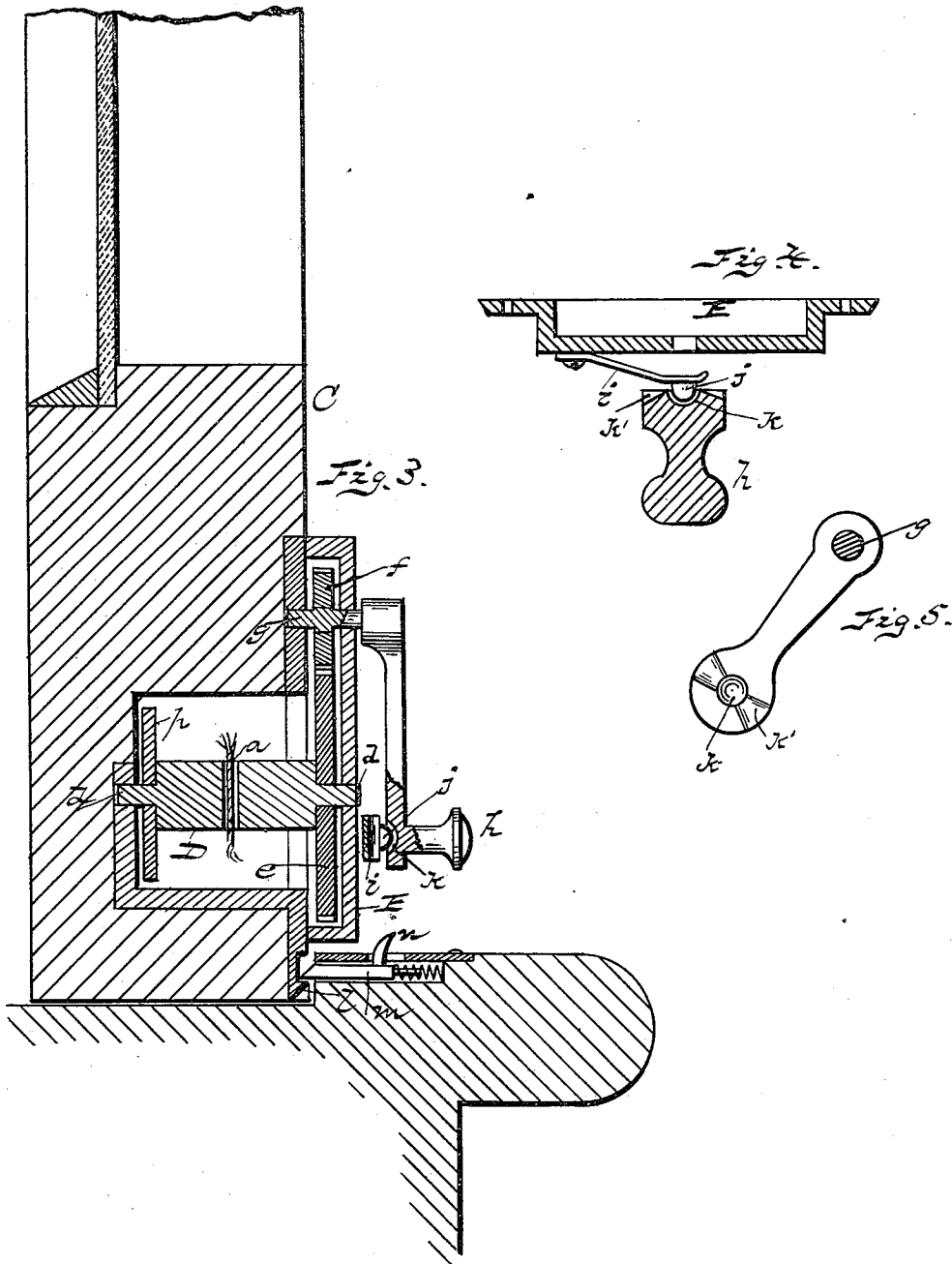
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WITNESSES
Jas. B. Clarke
Jm. Munder

INVENTOR
J. D. Hess.
J. E. B. Bate
Attorney

UNITED STATES PATENT OFFICE.

JOHN DAVID HESS, OF ABILENE, KANSAS.

SASH-BALANCE.

SPECIFICATION forming part of Letters Patent No. 360,297, dated March 29, 1887.

Application filed December 11, 1886. Serial No 221,286. (No model.)

To all whom it may concern:

Be it known that I, JOHN DAVID HESS, a citizen of the United States, residing at Abilene, in the county of Dickinson and State of Kansas, have invented certain new and useful Improvements in Sash Balances and Fasteners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in balancing window-sashes by causing the weight of one sash to balance or counterpoise the weight of the other sash; and it consists in certain novel improvements in locking the sashes at any desired point and presenting a lock or fastener for the sashes which cannot be tampered with from the outside of the window, thus producing a burglar-proof sash fastener or lock, at the same time serving to raise or lower the sashes, all as will be hereinafter fully explained, and particularly pointed out in the appended claim.

The annexed drawings, to which reference is made, fully illustrate my invention, in which Figure 1 represents a face view of a window, showing my device applied thereto. Fig. 2 is a vertical sectional view of the same, taken on line *xx*, Fig. 1. Fig. 3 is an enlarged sectional view of the lower sash and part of the window-sill, and Figs. 4 and 5 are detail views.

Referring by letter to the accompanying drawings, A designates the window-frame, which is constructed in the well-known manner, and B is the upper window-sash; C, the lower sash.

In the vertical edges of the lower sash are grooves adapted to receive cords or wires *a a*. The upper portion of these cords or wires are carried over grooved pulleys *b b*, which are journaled in suitable castings that are recessed into the window-frame A at the upper end thereof, and the upper ends of said cords are suitably secured to the upper portion or top rail of the upper sash, as at *a'*.

The cords aforesaid are carried over the upper grooved pulleys and down through the grooves or channels in the edges of the lower sash and passed beneath grooved pulleys *c c*, journaled in castings which are recessed into

the lower sash, C, and thence carried to the center of the lower rail of said lower sash and secured to and passed around a drum or windlass, D, which is also recessed into said sash. This drum is flanged at *p*, and its shaft *d* has end bearings in a suitable casing, E, properly secured to the sash, and, if desired, handsomely ornamented.

The outer end of the drum-shaft is provided with a gear-wheel, *e*, which engages a smaller gear-wheel, *f*, the shaft *g* of which is journaled in the casing. The outer end of said shaft has applied to it a crank-handle, which is provided with knob *h*, by means of which the sashes can be raised or lowered, and also by means of which the sashes can be adjusted by winding the cords on the windlass or unwinding these cords therefrom.

For the purpose of fixing the sashes or retaining them in different positions when partially raised or lowered, I employ a spring-catch, *i*, which is secured at one end to the face of the casing E, and is provided on its free end with a raised projection or pin, *j*, which engages an opening or recess, *k*, having guide-grooves *k'* in the inner face of the crank-handle, as clearly shown in the drawings, and which spring is self-operating in engaging and disengaging the recess in the handle at every revolution of said handle in winding the drum, and retains the handle, thus fixing the sashes in position and preventing the drum from rotating except when turned by the operator; and in order to render the sashes burglar-proof I provide the lower sash with a hook, *l*, having a beveled edge, which engages a spring-bolt, *m*, recessed in the window-frame, and provided with a projecting knob, *n*, by which the bolt is drawn back, and thus disengaging said bolt from the hook on the lower sash when it is desired to raise the same, and when the sash is at its lowest position the bolt and hook are self-locked, thus preventing any one from raising the lower sash from outside of the window, and at the same time prevents the upper sash from being lowered.

It will thus be observed that I am able at slight expense to cause the weight of one sash to balance the other sash, and to adjust and secure the sashes so as to leave any desired opening above or below the same. At the same

time the lower sash can be securely locked to the window-sill by means of the hook and spring-bolt, while the upper sash, if desirable, can be lowered sufficiently for ventilation and held in a fixed position, and it is durable, cheap to manufacture, can be applied to old windows as well as new ones, and quickly and easily operated.

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

The combination, with the two sashes, the cords or wires, and pulleys, of the operating mechanism shown, consisting of the drum D, having the flange *p*, gear-wheel *e*, which forms a flange for that end of the windlass D, and

gear-wheel *f*, journaled in the casing E, the crank-handle secured to the shaft *g*, and provided with the recess *k* and grooves *k'*, the spring-catch *i*, provided with the lug *j*, adapted to engage said recess, the hook *l* on the casing and forming a part thereof, and spring-bolt *m*, secured to the window-sill, the whole adapted to operate as shown, described, and for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN DAVID HESS.

Witnesses:

WM. O. HITESHUE,
A. S. DAVIDSON.