(No Model.)

J. T. WOLFF.

FIRE ESCAPE.

No. 245,334. Patented Aug. 9, 1881.

Fig. 1.

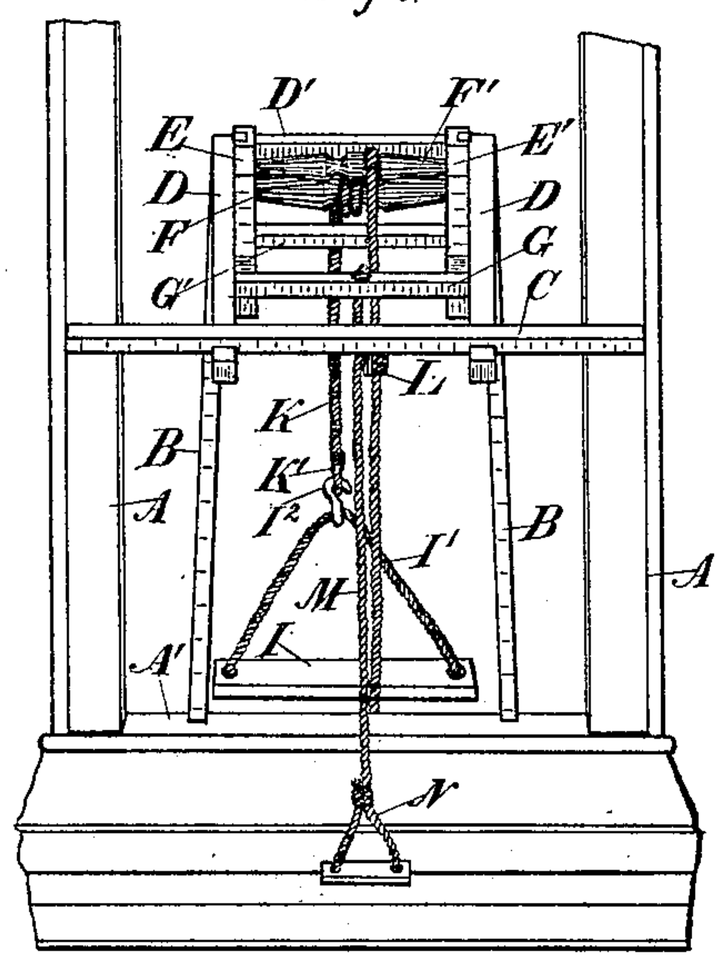


Fig. 2.

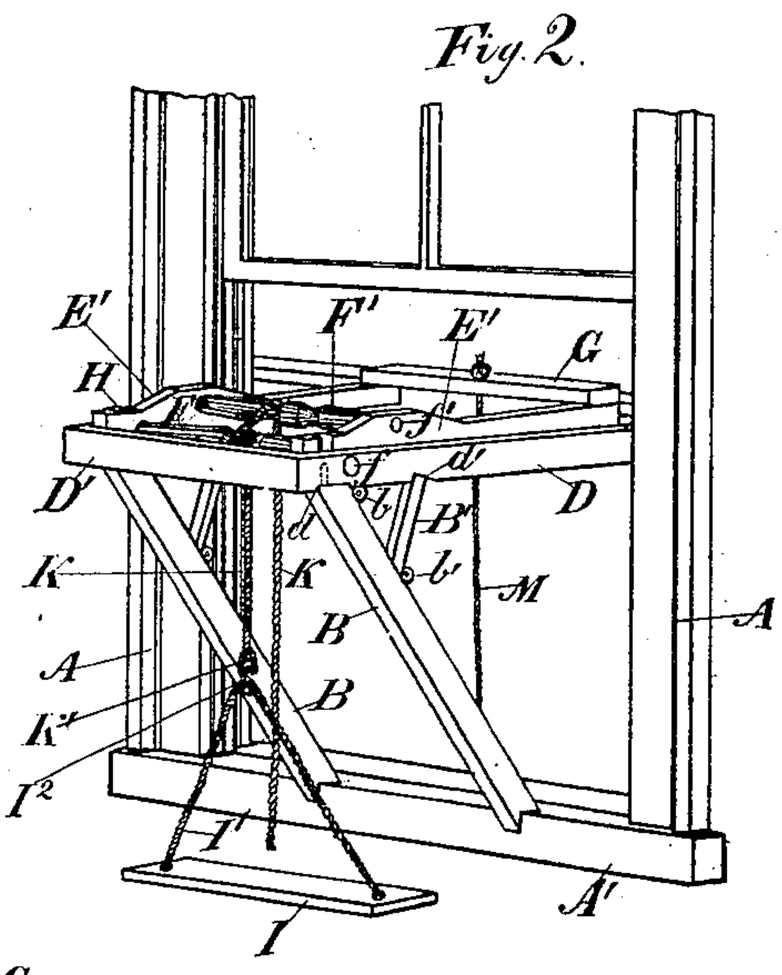


Fig. 3.

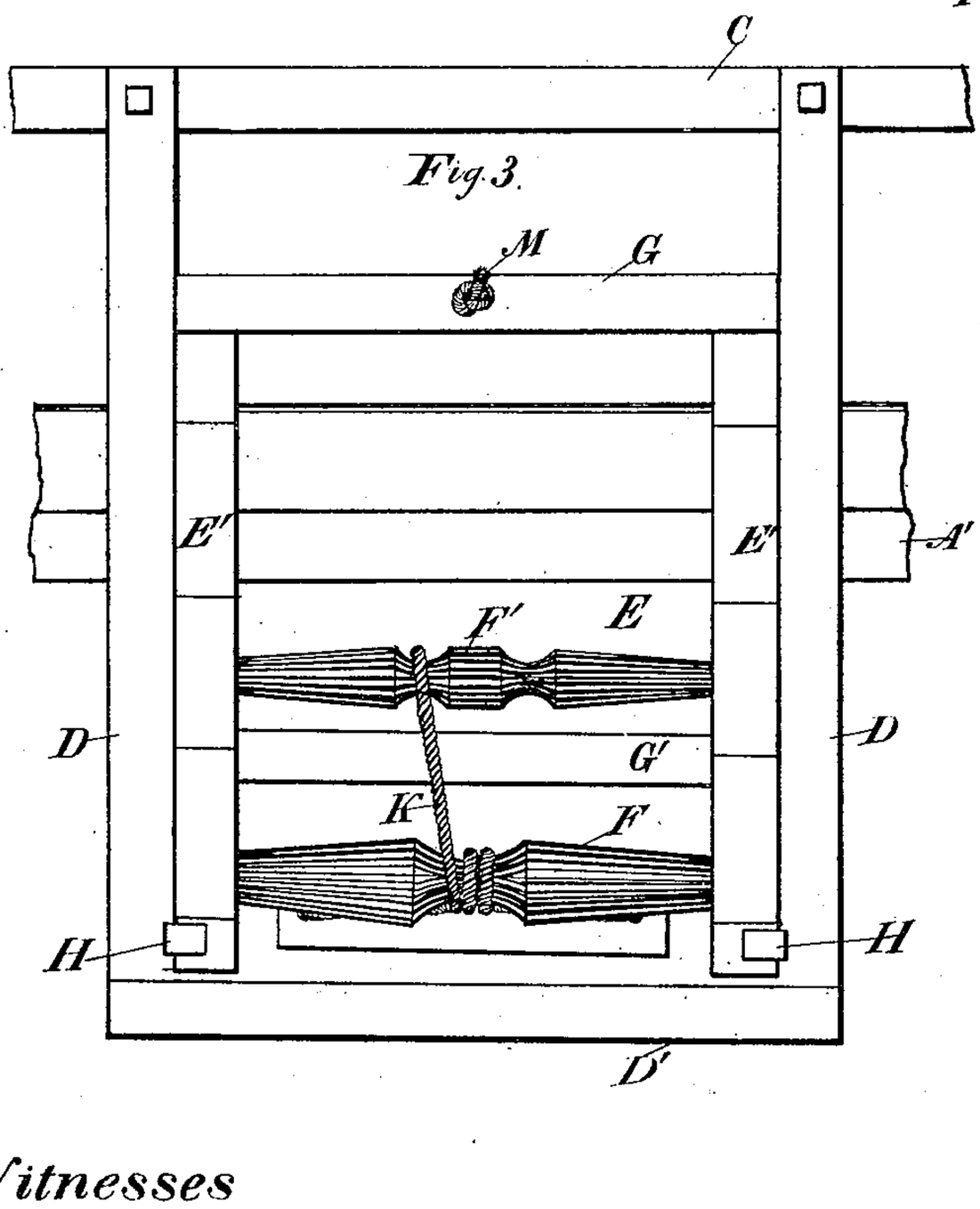
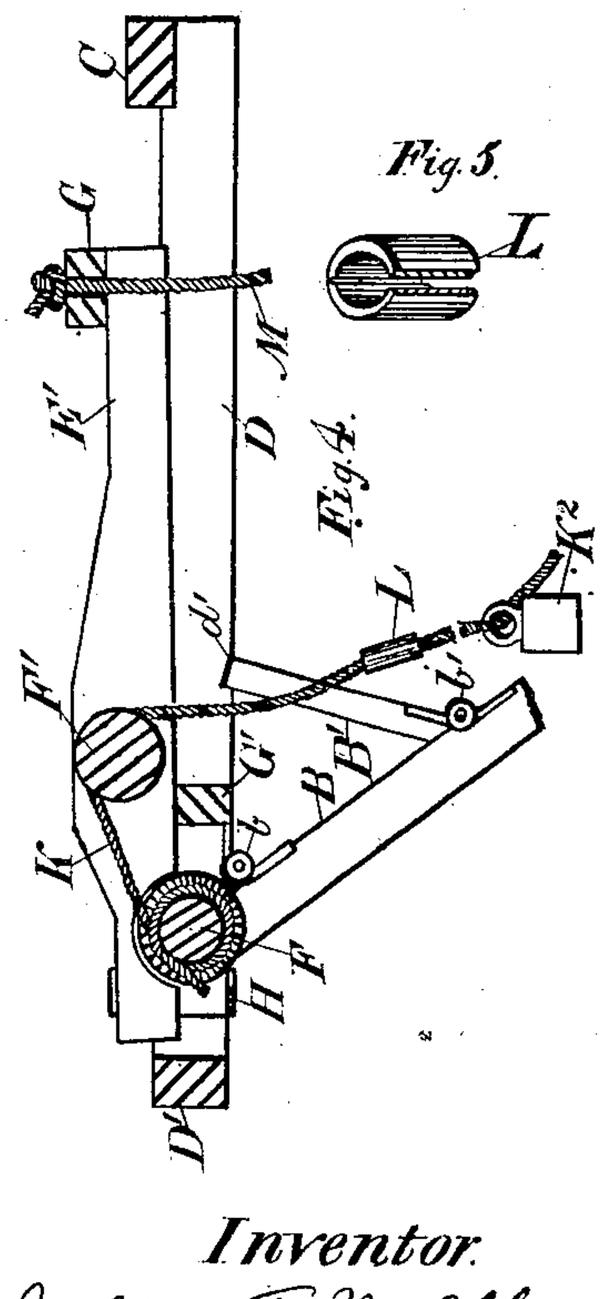


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

JULIUS T. WOLFF, OF MAYVILLE, WISCONSIN.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 245,334, dated August 9, 1881.

Application filed June 8, 1881. (No model.)

To all whom it may concern:

Be it known that I, JULIUS T. WOLFF, of Mayville, in the county of Dodge, and in the State of Wisconsin, have invented certain new and useful Improvements in Window Fire-Escapes; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to window fire-escapes; and it consists in a novel combination and arrangement of parts, all as fully set forth hereinafter.

In the drawings, Figure 1 is an elevation of my device from the inside of the room, and Fig. 2 is a perspective view of my device from outside the building, the apparatus being shown in position for use in both views. Fig. 3 is a plan view, and Figs. 4 and 5 are details.

A A′ represent a window frame or casing, within and to which my device is secured by the notched and pivoted braces B B, (bearing against the outside edge of the sill A′,) and the bar C, passing beyond the inner sides of the window-casing within the room. To this bar is secured the frame D D′, and the braces B B are hinged at *b* to the sides D of this frame, (being further secured when in position for use by pins on the hinged ends of the braces B, passing into a hole in the under side of the sides D, as shown in dotted lines in Fig. 2,) so that the braces may be folded against the sides D when the device is not in use, and thus economize in storage-room. The sides D are notched at *d* to receive the ends of the braces B, and also at *d′* to receive the ends of the props B′, which, in turn, are hinged at *b′* to the braces B, and are folded down thereon when the said braces are to be folded against the sides D.

An inner frame, E, fits within the frame D D′. This inner frame is composed of side boards, E′ E′, united by the roller F′ and cleats or beams G G′. The ends of the roller F pass under the side boards, E′ E′, of the inner frame (which are hollowed out on their under sides to form bearing-surfaces) and through the sides D D of the outer frame, in which the axles *f* of this roller freely turn, while the axles *f′* of the roller F′ extend through the side boards, E′ E′, above the sides D D. A cleat or beam, G, stretches across and is secured to the inner upper ends of the side boards, E′ E′, and a similar cleat, G′, extends across and is secured to the under sides of these side boards, between the rollers F and F′, thus making the inner frame strong and secure and keeping all its parts in proper relation to each other. Hooks H, consisting of straight strips of metal with their ends bent at right angles in opposite directions serve to connect the outer ends of the side boards, E′, with the sides D, in addition to the support afforded by the axles of the roller F, already described. As the inner frame bears directly down upon the roller F, any pressure applied to the said inner frame causes it to act as a brake and check partially or wholly the revolution of the roller F.

I represents the swing-seat, suspended by the rope K, which is wound several turns around the roller F (grooved in its center for the reception of the rope) and then carried over the roller F′ (resting in either the right or left hand groove, according to the way in which the rope is wound,) from whence it hangs down, as shown, a grasp or handle, L, being provided, so that the hand of the user may not be lacerated by the friction of the rope in its movement. This handle is made in two sections, and hinged as shown—that is, preferably by an outside surface of cloth or leather, to which each section is secured—and each section is hollowed out to receive the rope, which slides freely between the two halves, and by tightening the hold on the handle the rope may be checked in its movement or wholly stopped at will. This handle may be secured to the rope or kept near it, as preferred. As an additional check the rope M is furnished, extending from the cleat G and terminating in a stirrup, N, brought within the room, so that a person in the room lowering another person to the ground can retard or stop the descent at any point by simply pressing his foot upon the stirrup, causing the inner frame to act as a brake upon the roller F, as already described.

A weight or counter-balance, K^2, is preferably secured to the rope K, (say about midway of the distance between the window and the ground when the swing-seat is nearly lowered,) so that the weight of the person descending may be partly neutralized, and less exertion required for a steady and comparatively slow descent.

The swing-seat I is suspended from a rope,

I′, fastened (as by passing through holes and knotting the ends) at each end of the seat, and at the apex of this rope, when in position for use, a hook, I^2, is secured, which fits into a loop or ring, K′, at the end of the rope K. This hook is preferably made double and removable, and thus a basket may be secured to the rope K, in place of the swing-seat, should it be necessary to lower a child, an animal, or any valuables or small articles of furniture from the room, without the necessity of any person descending with the same. In such cases the rope K would, of course, be operated from above by the person in the room, and the stirrup would be of great service in operating the brake-frame, leaving both hands of the operator free.

The operation of my device is extremely simple and very effective. When all have been lowered from the room except one person, or when any one prefers to lower himself, he draws the swing-seat about level with the window-sill and close up to it, and seating himself on the sill, lets his legs hang over the seat, and then taking hold of the handle L of the rope K with his right hand and the end of the rope above the swing-seat with his left hand, he slips into position on the swing-seat and quickly descends, guiding and regulating the speed of his descent by means of the pressure he applies to the handle L. The height of the frames D, D′, and E above the window-sill should be from two and one-half to three feet, and their outer ends should project far enough to avoid any cornices or other projections on the outer wall of the building, allowance for this being made when the fire-escape is constructed. The stirrup will, as stated, be brought within the room, so that it will hang an inch or two above the floor, and the width of the window-seat in any given case will determine the distance between the bar C and the notched bottoms of the braces B B. When not in use the props B′ are folded against the braces B, and these braces are folded against the sides D of the outer frame, so that the whole device is rendered compact and occupies but little room in storage, and yet is capable of instant use by simply raising the lower sash and unfolding the device in and against the window-casing, as shown, care being taken to see that the rope K is properly wound around the roller F before the device is used.

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

1. The combination of the outer braced frame, roller F, and inner frame, E, with the rope M and stirrup N, as shown and described.

2. The combination of the bar C, outer frame, D D′, roller F, inner frame, E, having side boards, E′, and roller F′, hinged and notched braces B, and props B′, as shown and described.

3. The combination of the braced inner and outer frames, hinged and connected together, as described, and the rollers F F′ with the rope K and swing-seat I I′, and the rope M and stirrup N, as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 1st day of June, 1881.

JULIUS T. WOLFF.

Witnesses:
S. S. STOUT,
HAROLD G. UNDERWOOD.