(No Model.)

D. SCHMIDT.

FIRE ESCAPE.

No. 260,245. Patented June 27, 1882.

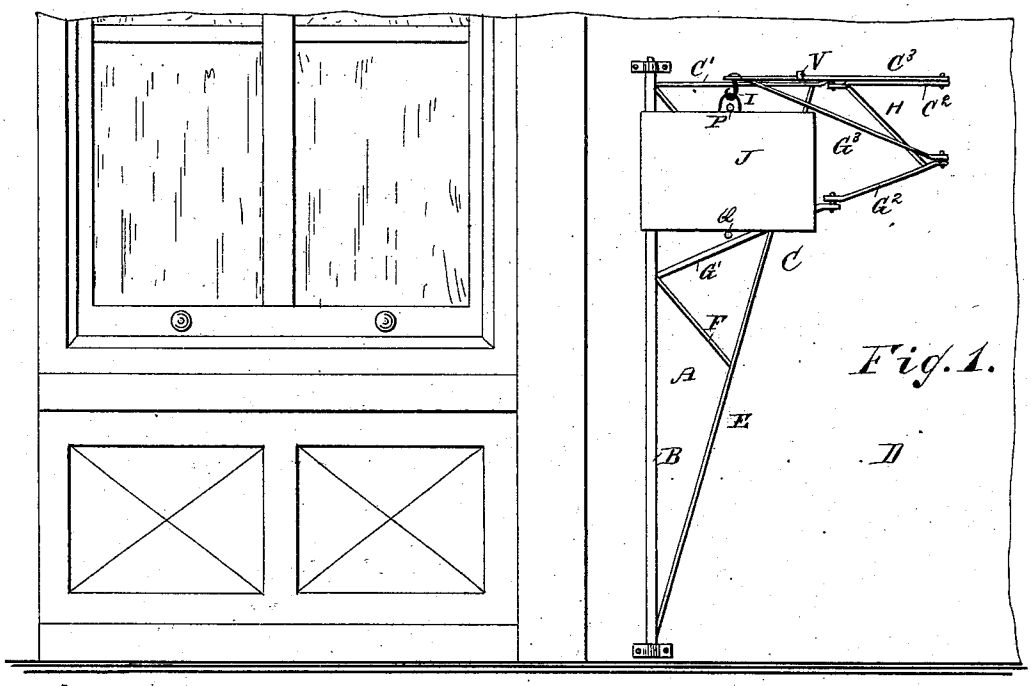


Fig. 1.

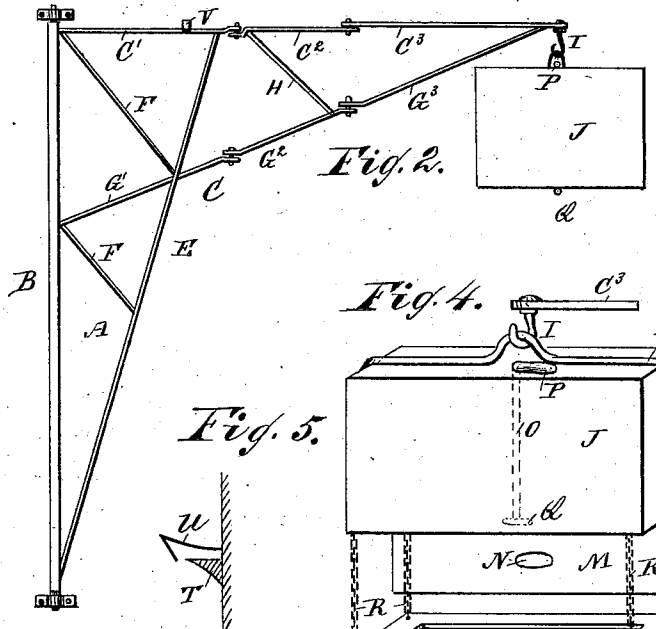


Fig. 2.

Fig. 3.

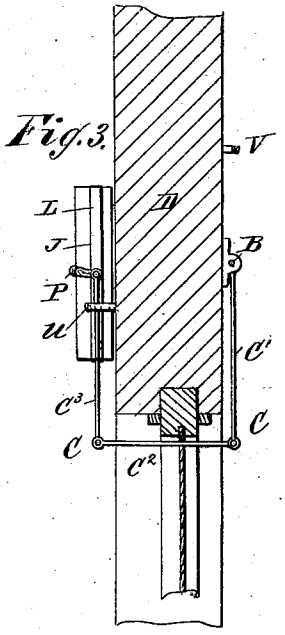


Fig. 4.

Fig. 5.

WITNESSES:

Thos. G. Hoskin
A. Sedgwick

INVENTOR:

D. Schmidt

BY Munn & Co

ATTORNEYS.

N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

DIEDRICH SCHMIDT, OF NEW YORK, N. Y.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 260,245, dated June 27, 1882.

Application filed February 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, DIEDRICH SCHMIDT, of the city, county, and State of New York, have invented a new and Improved Fire-Escape, of which the following is a full, clear, and exact description.

The invention consists in a swinging folding derrick-frame formed of hinged sections, which frame is pivoted to the inner surface of the wall in such a manner that the end of the arm of this frame can be swung out of the window-opening to rest against the outer surface of the wall, from the outer end of which arm a box containing a folding chain ladder is suspended, which ladder drops from the box when the swinging bottom of the same is opened, thus permitting a person to pass down on this ladder. The derrick-frame can be folded very compactly when not in use, and can be swung out of the window-opening, ready for use in an instant.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal elevation of my improved fire-escape, showing it folded. Fig. 2 is a longitudinal elevation of the derrick, showing it extended or unfolded. Fig. 3 is a sectional plan view of part of the wall, showing the position of the derrick-frame when the fire-escape is in use. Fig. 4 is a perspective view of the box for receiving the chain ladder, the box being shown opened and part of the chain ladder hanging from the same. Fig. 5 is a side elevation of the hook projecting from the outer surface of the wall for supporting the end of the derrick-frame when the fire-escape is in use.

A derrick-frame, A, is formed of an upright or standard, B, and of a folding arm, C, formed of three bars, C' C^2 C^3, pivoted to each other to form one straight arm when extended. The standard B is pivoted to the inner surface of the wall D near the window. The bar C' of the folding arm of the derrick-frame is braced by a bar, E, which in turn is braced from the standard B by diagonals F F. The outer end of the bar C^3 is braced by a bar, G^3, pivoted to a bar, G^2, which in turn is pivoted to a bar, G', uniting the standard B and the brace-bar E. The joints of the bars C' C^2 and C^2 C^3 and those of the braces G' G^2 and G^2 G^3 are respectively directly above each other, so that the arm of the derrick-frame consists of three sections, of which one is rigidly attached to the standard and the other two are pivoted. The inner end of the bar C^2 and the outer end of the brace-bar G^2 are connected by a diagonal brace, H.

I do not limit myself to the herein-described construction of the derrick-frame, but may modify it as circumstances may require.

The length of the bar C' of the derrick-arm must be equal to the distance from the standard B to the outer edge of the window-frame opening, as shown in Fig. 3. The bar C^2 must be in length equal to the thickness of the wall, window-casing, and shutter, and the length of the bar C^3 must be slightly greater than the distance from the end of the bar C^2 to beyond the outer edge of the opened shutter. If the building is not provided with shutters, the bar C^3 can be shorter.

The bar C^3 is provided at its outer end with a hook, I, which is preferably swiveled. From this hook I a box, J, containing a folding chain ladder, K, is suspended by means of a bail, L, pivoted to the ends of this box. This box J is provided with a pivoted bottom, M, provided with a longitudinal aperture, N. A rod, O, passes vertically through the box J, and is provided at its upper end with a handle, P, and at its lower end with a cross-head, Q, adapted to be passed through the aperture N in the pivoted bottom M. When the pivoted bottom M is raised and is to be locked in this position the cross-head Q is passed through the aperture N and turned to be at right angles to the same.

The chain ladder K consists of four chains, R, secured at the corners of the top of the box J, and carrying a series of recessed or other suitable metal steps, S.

A bracket, T, projects from the outer surface of the wall, and is adapted to support the outer end of the bar C^3 when the derrick-frame is swung outward.

A spring-catch, U, provided with a hooked or barbed point, projects from the wall directly above the bracket T and prevents the bar C^3 from slipping off the bracket T.

A stud or hook, V, projects from the inner surface of the wall, and serves to support the bar C^3 when the derrick-frame is folded.

If desired, the swinging folding arm C can be formed of two sections only—for instance, if the standard B is pivoted to a wall at right angles to the window. In that case one bar or section of the arm would extend out of the window and the outer section could be folded against the outer surface of the wall.

The fire-escape is used in the following manner: Ordinarily the derrick-frame A is folded on the inner side of the wall, as shown in Fig. 1. If the fire-escape is to be used, the window is raised and the derrick-arm is swung outward into the position shown in Fig. 3. The bar C^3 will raise the spring U and pass under the same on the bracket T, and will be held on the same by this spring-hook. The bracket T thus supports the end of the bar C^3. The handle P is then turned so that the cross-head Q will be parallel with the aperture N, so that the hinged bottom M can drop, thus permitting the chain ladder K, which is folded in the box J, to drop from the bottom of the same. A person can easily and safely descend by means of this ladder K.

The apparatus can be ornamented and varnished, so as to have an elegant appearance. The box J can be made of various sizes, according to the length of ladder to be held in the same.

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

1. In a fire-escape, the combination, with a swinging folding derrick-frame pivoted to the inner side of the wall, of a box suspended from the end of the arm of the frame, and of a folding ladder in this box, substantially as herein shown and described, and for the purpose set forth.

2. In a fire-escape, the combination, with a swinging folding derrick-frame pivoted to the inner side of the wall, of a bracket or hook projecting from the outer surface of the wall for supporting the end of the arm of the derrick-frame when the same is swung outward against the outer surface of the wall, substantially as herein shown and described, and for the purpose set forth.

3. In a fire-escape, the combination, with the swinging folding derrick-frame A, of the bracket T, projecting from the outer surface of the wall, and the spring catch or hook U above the bracket T, substantially as herein shown and described, and for the purpose set forth.

4. In a fire-escape, a derrick-frame made substantially as herein shown and described, and consisting of a pivoted standard provided with a fixed arm, to which one or more arms or sections are pivoted, whereby the end of the frame can be swung out through a window-opening against the outer surface of the wall, as set forth.

DIEDRICH SCHMIDT.

Witnesses:
OSCAR F. GUNZ,
C. SEDGWICK.