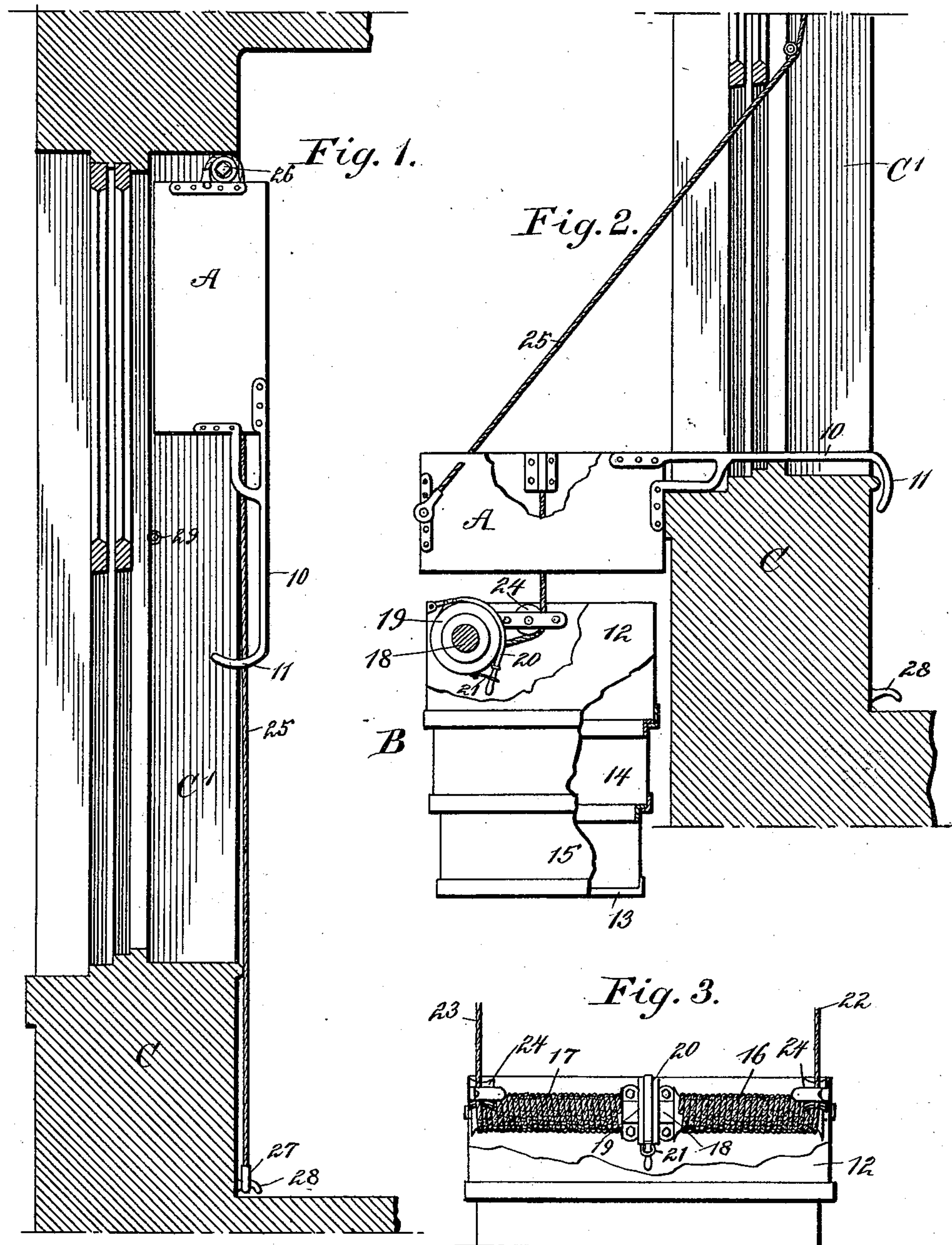


(No Model.)

F. W. RAWLE.  
FIRE ESCAPE.

No. 512,899.

Patented Jan. 16, 1894.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

FRANCIS WILLIAM RAWLE, OF NEW YORK, N. Y.

## FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 512,899, dated January 16, 1894.

Application filed August 24, 1893. Serial No. 483,951. (No model).

*To all whom it may concern:*

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

My invention relates to an improvement in fire escapes, and it has for its object to provide an escape capable of storage attachment  
10 in a compartment in a manner which will not obstruct the compartment, the device being in such position that it may be expeditiously and conveniently brought into place for use, and whereby also the construction of the machine will be such that it may be operated by  
15 any one of ordinary intelligence, persons being enabled to enter the section of the machine adapted to descend, with perfect safety.

Another feature of the invention is to provide a means whereby the occupant of the descending section of the escape may control the descent, the brake mechanism being of an exceedingly simple character.

The invention consists in the novel construction and combination of the several  
25 parts, as will be hereinafter fully set forth and pointed out in the claims.

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

Figure 1 is a vertical section through a window, illustrating the device in side elevation and in storage position. Fig. 2 is a partial vertical section through a window, illustrating the device in position for use, portions of the device being broken away to disclose its interior; and Fig. 3 is a detail sectional  
40 view of the upper part of the carriage portion of the device, illustrating the brake mechanism.

The fire escape is made in two sections, a body section A, and what may be termed a  
45 carriage section B. The body section is preferably made of metal, and is usually box-like in construction, but it may be of any desired contour, and the said body section is open at top and bottom, but permanently closed at its  
50 sides and ends. Brackets 10, are secured to the under portion of the body A, and the said brackets extend a desired distance beyond

one of its side faces. The outer ends 11 of the brackets are of hook-like formation, being adapted, when the brackets are carried  
55 over the sill C of the window C' for example, to engage with the inner surface of the window below the sill, or the inner wall of the compartment in which the window is erected. The bracket is preferably made wider at its  
60 outer end than at any other portion in its length, since the wider portion is adapted to rest against the outer sill of the window, and in so doing will permit the brackets to extend within the window in a straight or horizontal  
65 direction, as shown in Fig. 2.

The carriage section B of the escape, is adapted to fold up within itself, and be wholly contained within the body section A; therefore the said section is either made of a pliable material, such as for example canvas, or  
70 it is made up of telescopic sections; but preferably the upper portion 12 of the carriage section is of metal, or other rigid material, and it corresponds in general contour to that of  
75 the body section A of the device, but is of less dimensions, as it is adapted to fit into the body section. In the event the body section is not made telescopic, its sides and ends below the upper metal portion 12 will be made  
80 of canvas, cloth, or its equivalent, which material will be securely fastened to the upper rigid section; and the bottom 13 of the carriage section may be of wood or metal, and will likewise be attached to the flexible sides.  
85 The carriage section is made to taper in direction of its bottom, and therefore the canvas sides and rigid bottom may be readily folded up within the rigid upper section 12.

In the drawings the carriage section is illustrated as made up of telescopic sections, and  
90 as tapering as heretofore stated, one section being held to slide in the other; and the telescopic sections are shown as two in number, and are designated as 14 and 15, the lower  
95 section 15, having the bottom attached to it. Thus when the carriage section is not in use, the lower sections will be folded up one within the other, and are then folded up within the upper or rigid section, and in this shape the  
100 carriage section will be placed in the body section A. The carriage section is provided in its rigid portion preferably with two drums 16 and 17, mounted upon a single shaft 18,



and the said shaft is provided between the two drums with a wheel 19 securely fastened in place, and a strap brake 20 is attached to the upper portion of the said carriage section in such manner that it may be carried over the periphery of the wheel 19, as shown in Figs. 2 and 3; and a suitable latch 21, is provided whereby the brake may be locked in engagement with the wheel. The carriage and body sections are connected by two cables 22 and 23, preferably of metal, the cables being secured to the inner end faces of the body section, as shown in Fig. 2, and they extend downwardly therefrom over guide pulleys 24, located in the carriage section, and from the guide pulleys to the drums.

At each end of the body section A, at what is properly its outer side face, the ends of cables 25, are secured, and these cables are adapted to pass over pulleys or rollers 26, secured upon the upper face of the inner portion of the window framing for example, as shown in Fig. 1, and by means of the cables 25, after the carriage section is folded in the body section, the body section may be drawn upward to the upper portion of the window casing, its brackets 10 hanging downward, and the device is held in this position by placing rings 27 at the ends of the cables to engage with hooks 28, placed in a wall or other support. A pin, roller, or any form of offset 29, is usually placed upon the sides of the window frame in the lateral outward path of each of the suspension cables 25.

In operation, the device being in its suspended or storage position shown in Fig. 1, when it is required for use the rings 27 of the suspension cables are cast off from their keepers, and the device may then be readily lowered, and will fall of its own accord upon the window sill. In falling it will be guided outward, since its upper end is heaviest, and the hooks of its brackets will engage with the inner sill of the window, and thus it may be said that the device will practically place itself in position. The rings 27, prevent the suspension cords 25 from passing over the pulleys 26, and the cords or cables 25, upon striking the projections 29 will be flexed to such an extent as to render them taut, and they will serve as guy ropes or supports for the body of the device. Any person or persons may now enter the carriage section, which will drop out of the body section for a predetermined distance when the former is placed in position, as shown in Fig. 2, and

since the body section will form a guard or guide for the persons entering the carriage section an entrance thereto may be made without the least danger, and even timid persons need not be afraid to venture. After one or more persons have entered the carriage, the latch is removed from the brake, and the brake is manipulated upon the wheel 19 to regulate the descent of the carriage.

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 hollow body section adapted to be secured to a fixed support, of a folding carriage adapted to fit in the body section when not in use, and a lowering device carried by the carriage and connected with the body section, substantially as described.

2. In a fire escape, the combination with a hollow body section, and means for supporting it outside of a window, of a carriage formed of folding sections and adapted when folded and not in use to fit in the body section, a lowering rope carried by the carriage and connected with the body section, and a brake for retarding the descent of the carriage, substantially as described.

3. In a fire escape, the combination, with a body section adapted to be attached to a support and provided with bracket arms as a means of attachment, of a folding carriage section, drums located in the carriage section, cables secured to the body section and attached to the drums, and a brake mechanism, substantially as shown and described.

4. In a fire escape, the combination, with a support, and pulleys located upon the support, of a fire escape, the same consisting of a body section adapted for attachment to the support, the body section being provided with bracket arms as an anchorage medium, and cables attached to it, passed over the pulleys of the support and adapted for detachable engagement with a keeper, and a folding carriage section provided with a windlass or drums, cables attached to the body section and to the windlass or drums, and a brake mechanism controlling the movement of the windlass or drums, as and for the purpose specified.

FRANCIS WILLIAM RAWLE.

Witnesses:

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C. SEDGWICK.