

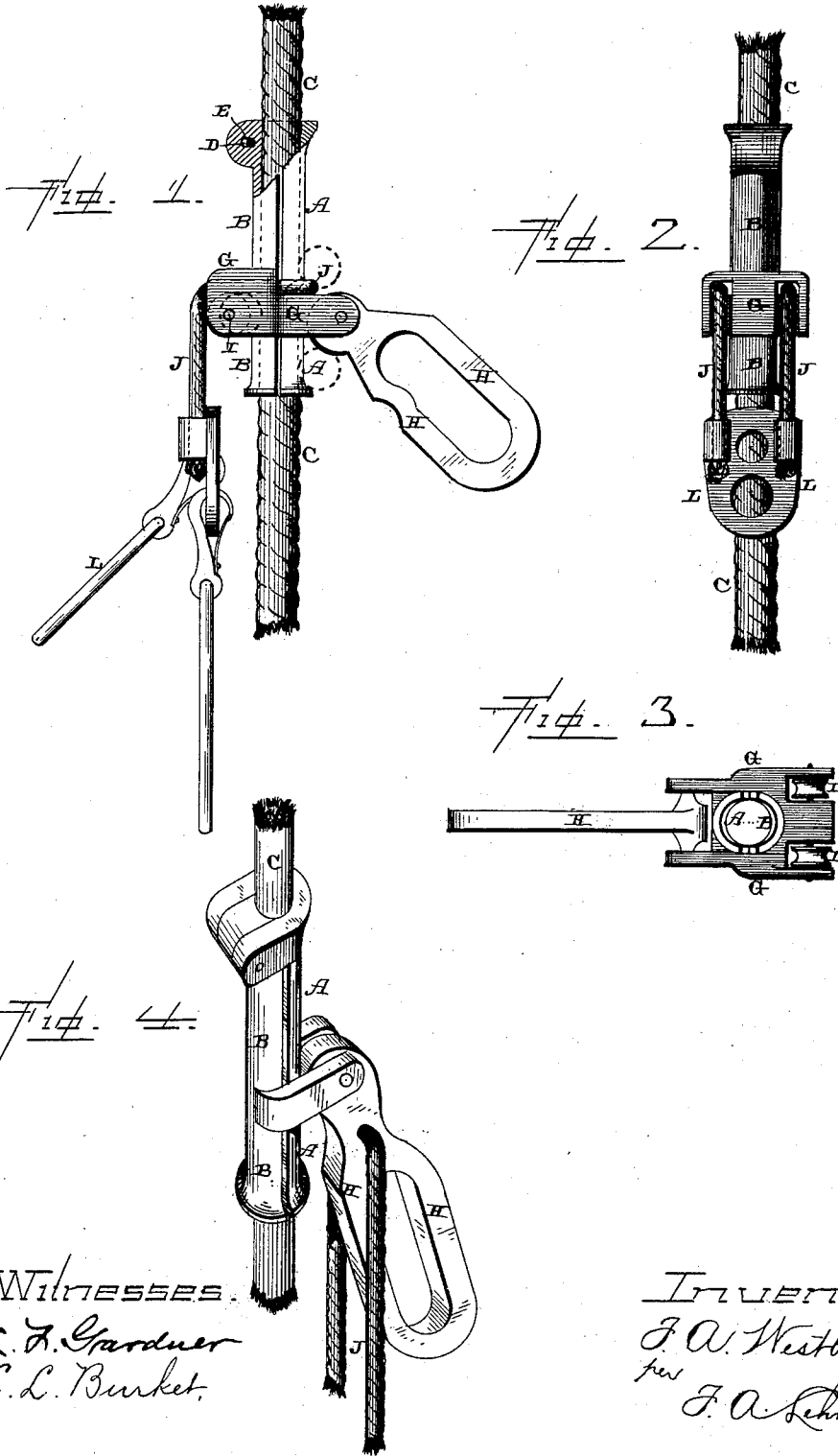
(No Model.)

F. A. WESTBROOK.

FIRE ESCAPE.

No. 375,031.

Patented Dec. 20, 1887.



WITNESSES.
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UNITED STATES PATENT OFFICE.

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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 375,031, dated December 20, 1887.

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To all whom it may concern:

Be it known that I, FRANK A. WESTBROOK, of Port Jervis, in the county of Orange and State of New York, have invented certain new and useful Improvements in Fire-Escapes; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in fire-escapes; and it consists in the combination of a frictional frame, which is composed of two parts and through which the main supporting-rope passes, with suitable guides and pulleys connected to one of the parts of the frame, and through which passes the rope which is to be passed around the body of the person being lowered to the ground, and a pivoted operating cam or handle by means of which the two parts of the frictional frame are made to tightly close upon the main rope, so as to stop the person's descent at any desired point, as will be more fully described hereinafter.

The object of my invention is to produce a fire-escape in which the rope which passes around the body of the person being lowered to the ground is made to act as a friction-brake upon the main rope, and thus the weight of the person being lowered is made to automatically regulate the descent to the ground.

Figure 1 is a side elevation, partly in section, of a fire-escape which embodies my invention. Fig. 2 is an edge view of the same. Fig. 3 is an inverted view. Fig. 4 shows a modification.

A B represent the two parts of a frictional frame, through which the main rope C passes. The two parts A B are pivoted together, and the hole D in the part B, through which the pivotal bolt E passes, is made oblong, as shown in Fig. 1, so that the two parts can have a slight play or movement in relation to each other, and thus be made to close more tightly upon the rope C than could be done if the parts were simply pivoted together. The length of the two parts A B will be regulated to suit the amount of friction it is desired to bring upon the rope C.

Cast in a single piece with the part B, or secured thereto in any suitable manner, is the guide and bearing G, which extends at right angles to the two parts A B, and which extends at both ends beyond the outer sides of the frictional frame, as shown in Fig. 1. In one end of this bearing is pivoted an operating clamp or lever, H, and in the opposite end are journaled the two guiding-pulleys I, which are separated from each other by about the width of the part B of the frictional frame. The rope J, which is to be passed around the body of the person who is making a descent from the burning building, is passed around the outer side of the part A of the frame, through the guide, and over the pulleys I, and then hangs downward to any convenient distance to be formed into a loop or to be fastened around the body of the person descending, as may be preferred. Connected to this rope J is a plate, L, for the person to catch hold of, while descending, with one hand, while the clamping-lever is grasped by the other. As the rope J passes around the outer side of the part A of the friction-frame it will be seen, that the whole weight of the person is exerted in drawing the two parts A B together, and thus produces a friction upon the rope C in exact proportion to the person's weight.

In fire-escapes heretofore made frictional devices have been used for regulating the descent of the person; but there has been no means by which the amount of friction exerted could be automatically regulated by the weight of the person, and hence the friction which would allow one person to descend too rapidly would not allow a much lighter person to descend at all. By means of the construction here shown each person automatically regulates the friction according to the weight as soon as the person attaches the rope J around the body and begins the descent.

The stop-lever H is to be operated only when the person descending upon the rope C desires to stop at any point. The weight of the person descending being made to regulate the necessary friction for the descent, there is no need of the lever, unless the person wishes to stop on the way down before the ground is reached. The inner end of this lever is made cam-shaped,

so that it bears against the outer side of the part A of the frictional frame when a direct downward pull is exerted upon it.

In Fig. 4 is shown a slight modification, in which the same pivoted frictional frame A B and the same clamping-lever H is used; but the combined bearing and the pulleys upon the side of the part B have been dispensed with. In this case the rope I has been connected directly to the lever H, so that the weight of the person descending is brought directly upon the lever H, and this lever clamps the two parts A B in direct proportion to the weight. In both cases, however, the weight of the person automatically regulates the descent from the building.

In Figs. 1, 2, and 3 only two frictional rollers are shown; but, if so desired, three frictional rollers may be employed, two of them being placed upon the part A and the other upon the part B, as shown in dotted lines.

Having thus described my invention, I claim—

1. In a fire escape, the combination of the

frictional frame composed of the two parts A B, pivoted together, the rope C and clamping-lever by which the two parts A B are forced together, and rope J, which is passed around the body of the descending person and which automatically regulates the friction of the two parts A B upon the rope C, substantially as described.

2. In a fire-escape, the combination of the frictional frame composed of the two parts A B, pivoted together, the rope C, which passes through the two parts of the frame, the combined guide and bearing provided with pulleys at one end, the lever H, pivoted in the bearing, and the rope J, which passes around the sides of the part A and automatically regulates the friction upon the rope C, substantially as set forth.

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

FRANK A. WESTBROOK.

Witnesses:

EDM. P. ELLIS,
A. S. PATTISON.