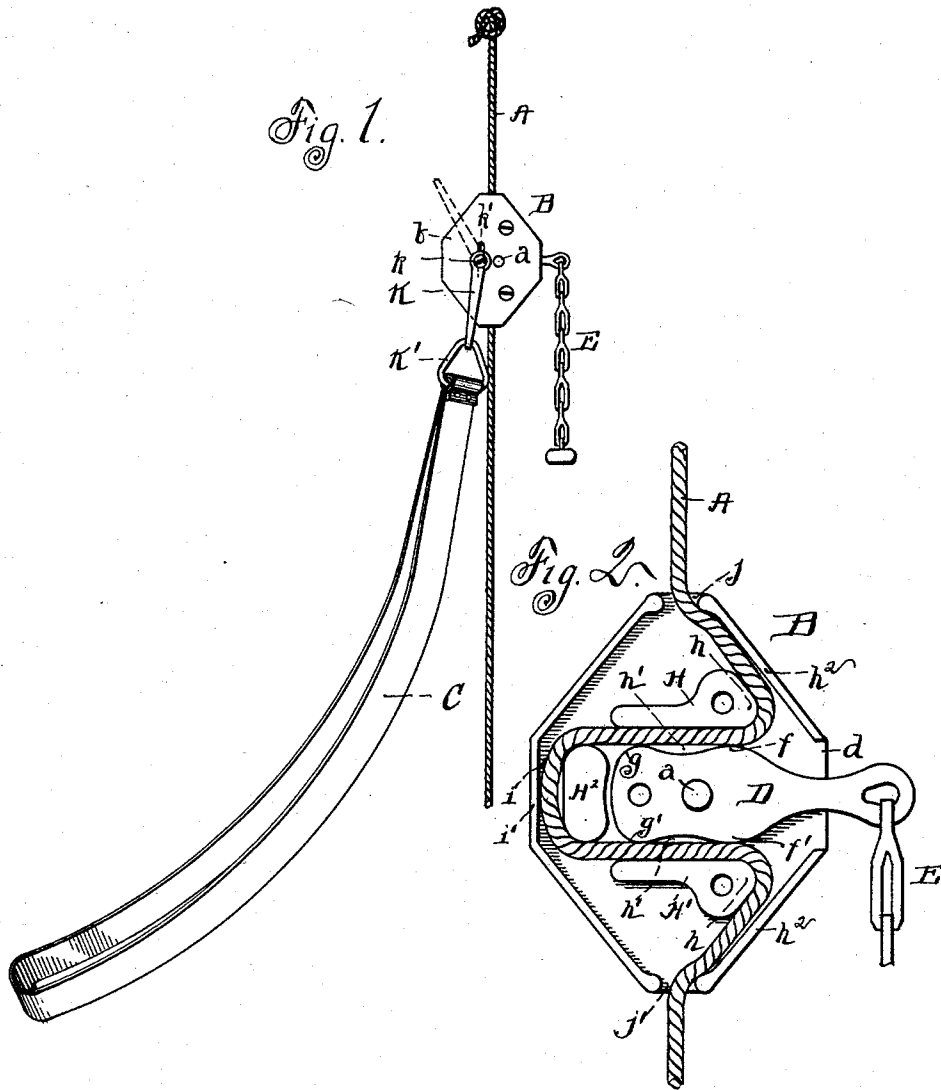


(No Model.)

C. M. FOWLER.  
FIRE ESCAPE.

No. 524,481.

Patented Aug. 14, 1894.



WITNESSES

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# UNITED STATES PATENT OFFICE.

CHARLES M. FOWLER, OF LOWELL, MASSACHUSETTS, ASSIGNOR OF PART OF HIS RIGHT TO GEORGE M. THOMPSON AND CHARLES B. CUTLER, OF SAME PLACE.

## FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 524,481, dated August 14, 1894.

Application filed December 13, 1893. Serial No. 493,550. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES M. FOWLER, a citizen of the United States, and a resident of Lowell, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Fire-Escapes; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is an elevation of the device with belt or sling in perspective, and Fig. 2 is an enlarged view of casing with one side removed showing the interior mechanism.

This invention has relation to fire escapes, and it consists in the novel construction and combination of parts, all as hereinafter described and pointed out in the appended claims.

The object of the invention is to provide an improvement in that class of fire escapes consisting of a rope, by means of which the descent from the building is made, and a frictional device applied to the rope, by means of which the descent may be regulated.

A more particular object is to provide an escape of this character, which is simple in construction, inexpensive to manufacture, simple, safe, and reliable in its operation, compact in structure so that it may be easily carried by a traveler, the frictional device being capable of reversal, end for end with the rope so that after one descent has been made, the said device can be reversed, and the escape used equally well for a second descent, without the necessity for pulling the rope back through the device.

Referring to the accompanying drawings, the letter A designates the rope, B the frictional device, and C the belt or sling.

The frictional device B, in which the invention essentially consists, is of the following construction: The letter B is more particularly applied to a boxing or casing which is shown as being of polygonal shape, this shape being more compact, and requiring less ma-

terial, although I do not confine myself to any particular shape. One side *b* of this box or casing forms a cover plate held in place by screws or other suitable means. Pivoted on a pin or stud *a* within said box or casing is a cam lever D whose longer arm projects outward, through a slot *d* in one side of said box or casing, and has attached thereto a short chain E, or its equivalent. Just in front of the stud or pin *a*, the said lever has, at its upper edge, a rounded swell or projection *f*, a similar and opposite projection *f'* being formed on the lower edge. The shorter arm of the lever has similar swells or projections *g*, *g'*, at its upper and lower edges respectively. Projecting from the inner face of the back plate of the said box or casing, one above and one below the lever D, and substantially parallel therewith, are two elongated lugs or projections H, H', having rounded ends *h*, and so situated as to leave channels *h'* for the rope A between the said lugs and the said lever, and also between the rounded ends *h* of the lugs, and the flanges *h<sup>2</sup>* of the box or casing.

H<sup>2</sup> is a third lug situated back of the short arm of the lever D, said lug being at substantially right angles to the lugs H, H'. Its ends are also rounded, and it is so shaped and disposed as to leave a channel *i* for the rope between it and the flange *i'* of the box or casing at the opposite side from the flanges *h<sup>2</sup>*.

The rope enters the box or casing through an aperture *j* in one end thereof, and leaves it by means of a similar aperture *j'* in the other end, and is intermediately rove, from the aperture *j*, around the end *h* of the lug H, between said lug and the lever D, around the lug H<sup>2</sup>, between the lug H' and the lever D, and around the end *h* of the lug H' in the channels *h'* and *i*, and thence to the aperture *j'*.

K designates a yoke, the arms of which are pivoted on a pin or bolt *k* which passes loosely through oblong slots *k'* in the front and back plates of the box or casing, and through an aperture in the short arm of the lever D. Attached to said yoke by a metallic loop K', or other suitable means, is the belt or sling C.

It will be apparent that the weight of the

body suspended in the sling C, will, through the yoke K, and the pin or bolt  $k'$ , cause the lever D to bite the rope between the swell or projection  $g'$  and the lug H', and also between the swell or projection  $f$  and the lug H, and in this manner prevent the device B from moving on the said rope. It will be further observed that force applied to the long arm of the lever D, by means of a pull on the chain E, will tend to prevent such bite on the rope, and that if the chain E be pulled with sufficient force, the said lever will instead bite the rope between the projection  $g$ , and the lug H, and between the projection  $f'$  and the lug H'. The said lever D therefore, with its attached chain affords a means of regulating the descent to any degree of slowness or rapidity.

The manner of using is as follows:—Each end of the rope should be provided with a loop. The loop at the short end of the rope is made fast to the window sill or casing by means of a suitable hook or screw eye, or it may be made fast to any firm object within the room. The coil or free end of the rope is then thrown out of the window, the rope being long enough to reach to, or nearly to, the ground. The person to descend puts the sling around the body just below the arms, or makes a seat of it, as may be desired. The lever chain E is grasped with one hand, and the descent regulated by pulling on it more or less. The yoke K is made to swing around the box or casing in one direction, and by so swinging it from one end to the other, it is obvious from the arrangement of the parts, that the device will work equally well either end up. By this arrangement, after one person has descended, the device may be hauled up for a second, the opposite end of the rope made fast, and a second descent made, thus avoiding the delay of pulling the friction device back on the rope to the starting point.

The advantages of the invention may be summed up as follows: It is small and compact; can be easily carried while traveling. It is simple in construction, no adjustment or regulation of parts being required, and there is nothing to get out of order. It can be put on the market at a price within the reach of all. It works equally well with persons of all weights, is reversible in the manner described, is perfectly safe, and is so constructed that no person can make a mistake in operating it, or can descend at a dangerous rapidity.

It can be operated with one hand, leaving the other free to take another person, or articles, down, or to keep the clothing or body free from projections, &c., on the building. 60

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

1. The herein described fire escape, comprising a rope, a frame or casing arranged to slide upon said rope, said frame or casing having apertures at opposite points to receive said rope, a cam lever pivoted in said casing and having its longer arm projected outwardly therefrom, a chain attached to said longer arm, a yoke pivoted to the shorter arm of said lever and free to swing partially around said frame or casing, whereby the latter may be used reversely end for end, lugs in said frame or casing adjacent to said lever and forming therewith frictional guides for said rope, and a belt or sling attached to said yoke, substantially as specified. 65 70 75

2. In a fire escape, a frictional device B, comprising a frame or casing having an opening in each end portion thereof, said openings being opposite each other, a cam lever pivoted within said frame or casing and having its longer arm projecting outward therefrom, cam projections  $f, f'$ , and  $g, g'$  on the shorter arm of said lever, two upon its upper and two upon its lower edge, lugs adjacent to said lever, and forming therewith frictional guides for a rope, and a swinging yoke attached to the shorter arm of said lever, substantially as specified. 80 85 90

3. In a fire escape, a frictional device, comprising a box or casing having apertures in its ends for a rope, a lever D pivoted in said box or casing, and having its longer arm projected outward from said casing, a chain attached to said arm, a bolt or pin through the shorter arm of said lever, said bolt or pin projecting through slots in the box or casing, a yoke pivoted on said bolt or pin, the lugs H, H', H<sup>2</sup>, in said box or casing, and forming with the flanges thereof, and with said lever, guides for a rope, and cam projections  $f, f'$ , and  $g, g'$ , on said lever, adapted to bite the rope against the said lugs H and H', substantially as specified. 95 100 105

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

CHARLES M. FOWLER.

Witnesses:

CHAS. H. CONANT,  
HARRIET W. CONANT.