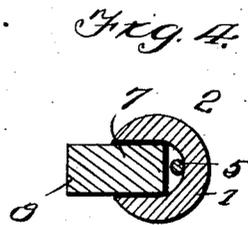
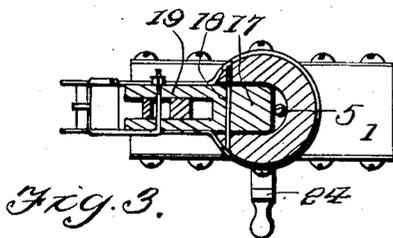
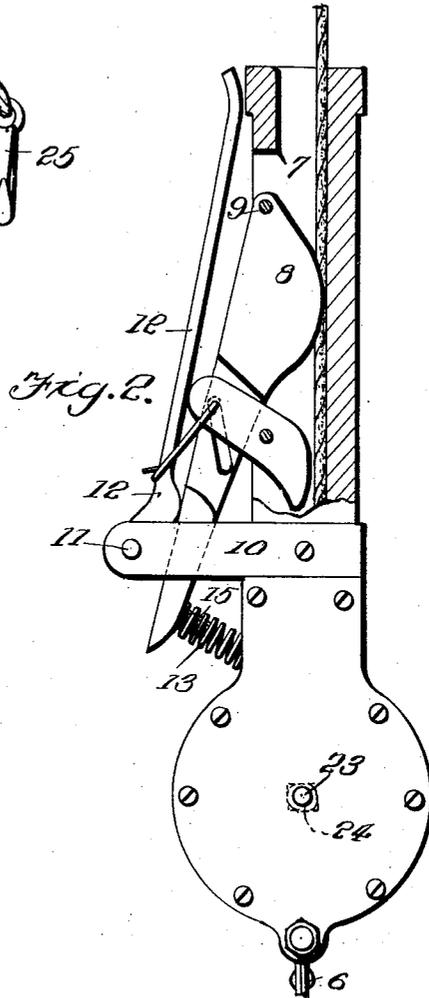
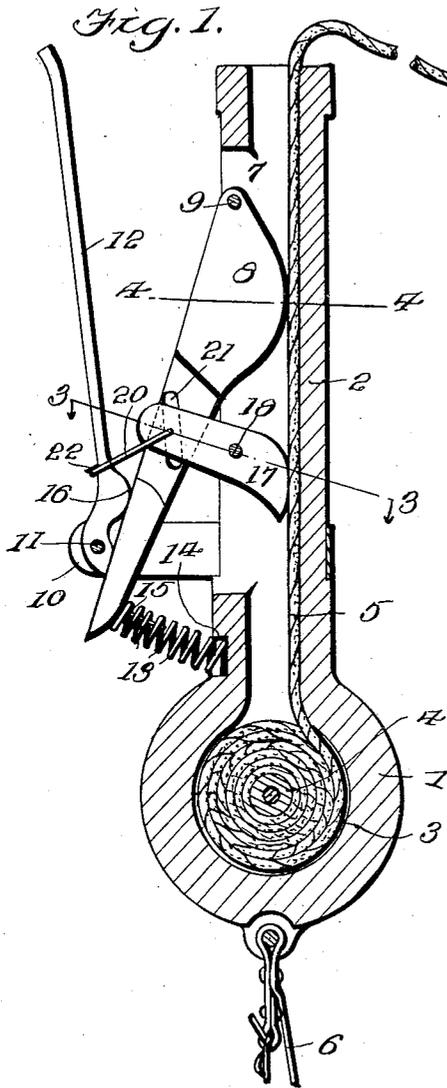


T. J. GILLOON & J. F. HUBER.
 FIRE ESCAPE.
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1,033,311.

Patented July 23, 1912.



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THOMAS J. GILLOON AND JOHN F. HUBER, OF ELMA, IOWA.

FIRE-ESCAPE.

1,033,311.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, THOMAS J. GILLOON and JOHN F. HUBER, citizens of the United States, residing at Elma, in the county of Howard and State of Iowa, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification.

This invention relates to fire escapes and more particularly to that type which are portable, and the invention aims primarily to provide an escape of this type which will be compact and may therefore be readily carried from place to place, and which may be readily set up for use.

The invention aims further to so construct the escape that a person descending from a burning building, by the use of the same, may regulate the speed of descent and may stop at any point, so that should it be desired to merely descend from an upper to a lower window, this may be done.

The invention also aims to provide an escape so constructed that should the person making the descent release the cable clutching device, an element of the device would be automatic and instantly actuated to positively clutch the cable and prevent further descent or so materially retard the speed of the descent that injury could not result.

For a full understanding of the invention reference is to be had to the following description and accompanying drawing, in which:—

Figure 1 is a vertical sectional view through the device, parts being shown in elevation. Fig. 2 is a similar view but showing the parts in the position which they assume when the means for frictionally gripping the cable is actuated. Fig. 3 is a section on the line 3—3 of Fig. 1. Fig. 4 is a section on the line 4—4 of Fig. 1.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawing by the same reference characters.

In the drawing, the escape is illustrated as embodying a member including a head 1 and a tubular hand-grip 2 which extends therefrom and has its bore opening into a recess 3 in the said head 1. A reel 4 is mounted to rotate in the recess 3 in the head and upon this reel is wound a cable 5. A strap 6 is attached to the head 1 and is designed to be fastened about the body of the

person using the escape. The grip 2 is formed in one side with a slot 7 which opens into the bore of the said grip.

A cable gripping cam 8 is pivoted as at 9 in the slot 7 near the upper end thereof and extends at an angle from the hand-grip and in the general direction of its lower end. The inner side of the cam 8 is designed to cooperate with the opposing portion of the wall of the bore of the grip and frictionally grip the cable as it is unwound from the reel and passes through the said bore. A clip 10 is secured upon the hand-grip 2 near its point of juncture with the head 1 and between the ends of the clip there is pivoted as at 11, a hand-lever 12, the function of which will be presently explained. A spring 13 is seated at one end in a socket 14 in that side of the hand-grip in which the slot 7 is formed and engages at its other end over a pin 15 at the lower end of the cam 8, the spring serving to normally hold the cam against the lever 12, or more specifically speaking against a cam portion 16 of the said lever. It is to be noted at this point that when the hand-lever 12 is swung toward the hand-grip 2 the cam portion 16 will ride against the outer edge of the cam 8, and inasmuch as the pivot 9 for the said cam is located at its extreme upper end, its cable engaging portion will be moved into gripping engagement with the cable 5 in the manner illustrated in Fig. 2 of the drawing. However, when the hand-lever 12 is released, the spring 13 will move the cam 8 to the position shown in Fig. 1 of the drawings, in which position it is out of gripping engagement with the cable 5, the hand-lever 12 being at the same time returned to its normal position, also as illustrated in Fig. 1 of the drawing.

A cam 17 is pivoted as at 18 in the slot 7 in the hand-grip 2 and is bifurcated as at 19 and has its furcations straddling an intermediate portion of the cam 8 as clearly illustrated in Fig. 3 of the drawing. A yoke 20 has one of its end-bars fitted through the ends of the furcations of the cam 17 and through a slot 21 formed in the portion of the cam 8 straddled by the said furcations 19 and this yoke 20 fits over the hand lever 12 and behind a stud 22 thereon. The inner end of the cam 17 cooperates with the wall of the bore of the hand-grip 2 in the same manner as does the cam 8. It will

be observed from inspection of Figs. 1 and 2 of the drawings that the distance between the pivot for the cam 17 and that portion of the cam which bears against the cable 5, is greater than the distance between this pivot and that portion of the wall of the bore directly opposite it in a line at right angles to the axis of the bore.

The spring 13, as heretofore stated, normally holds the cam 8 and lever 12 in the position shown in Fig. 1 of the drawing and a pull is normally exerted upon the yoke 20, serving to hold its inner end in engagement with the cable 5. Owing to the fact that the pivot for the cam 17 is located as above stated, should a pull be exerted upon the cable to unwind it from the reel, it will be positively gripped by the said cam and its passage through the bore of the hand-grip 2 will be prevented.

It will be observed that normally the cam 8 is out of engagement with the cable 5 but that when the hand-lever 12 is swung toward the hand-grip 2, the said cam 8 will be moved into gripping engagement with the cable as illustrated in Fig. 2 of the drawing. Simultaneously, the outer end of the cam 17 will be swung upwardly and its inner end downwardly and away from the cable 5 so that the cable may run through the hand-grip, although its passage there-through may be retarded by the engagement of the cam 8 thereagainst. Consequently, a person using the escape may readily regulate the speed of descent by gripping the hand-lever and hand-grip more or less firmly, and should the hand-lever be released, either by accident or intentionally, the spring 13 will act simultaneously to move the cam 8 out of gripping engagement with the cable and allow the cam 17 to positively grip the cable and prevent further descent.

One end of the shaft for the reel is squared as at 23 and a crank-handle 24 may be engaged therewith for the purpose of rotating the reel to wind the cable 5 thereon.

The cable 5 is provided at its free end with a snap hook 25 which may either be connected directly with some article of furniture from which the escape is to be lowered or may be engaged with the cable after the cable has been passed about some article of furniture.

Having thus described the invention what is claimed as new is:—

1. In a fire escape, a tubular hand-grip arranged for the passage of a cable, a grip for the cable mounted in the hand-grip and cooperating with the bore thereof to grip the cable, a spring normally holding the said cable grip out of gripping engagement with the cable, means normally, positively, clutching the cable, and a hand-lever upon the hand-grip cooperating with the cable

grip to move the same into gripping engagement with the cable and having connection with the cable clutching means whereby to render the same inoperative when the cable grip is moved into engagement with the cable.

2. In a fire escape, a tubular hand-grip arranged for the passage of a cable, means arranged to grip the cable, means normally, positively, clutching the cable, and a hand-lever having connection with both of said means and operable to render the cable clutching means inoperative to simultaneously actuate the cable gripping means to grip the cable.

3. In a fire escape, a member arranged for the passage thereover of a cable, a gripping member cooperating with the first mentioned member to grip the cable, means normally holding the said gripping member out of gripping engagement with the cable, means cooperating with the first mentioned member to positively clutch the cable, and a hand-lever operable to render the last mentioned means inoperative and to simultaneously move the gripping member into gripping engagement with the cable.

4. In a fire escape, a member arranged for the passage thereover of a cable, means normally, positively holding the cable against such movement, a cable gripping member arranged to cooperate with the first mentioned member to retard the passage of the cable, means normally holding the said gripping member out of gripping engagement with the cable, and means operable to render inoperative the means for positively holding the cable and to simultaneously render the cable gripping means operable to grip the cable.

5. In a fire escape, a tubular hand-grip arranged for the passage of a cable, the said grip being formed in its side with a slot, a cable gripping cam pivoted in the slot and arranged to cooperate with the wall of the bore in the hand-grip whereby to clutch the cable, a cam mounted in the slot and arranged to normally, positively clutch the cable, means normally holding the first mentioned cam out of gripping engagement with the cable and the second mentioned cam in such engagement, and means extending beside the hand-grip and operable to simultaneously move the first mentioned cam into gripping engagement with the cable and to move the second mentioned cam out of such engagement.

6. In a fire-escape, a tubular hand-grip arranged for the passage of a cable, a cam mounted upon the hand-grip and arranged to frictionally grip the cable and retard its passage through the hand-grip, a cam also mounted upon the hand-grip and normally cooperating with the cable to positively clutch the cable and hold it against passage

through the hand-grip, a hand-lever pivotally mounted upon the grip and having a cam portion cooperating with the first mentioned cam and arranged to move the said
5 first mentioned cam into gripping engagement with the cable, and connection between the first and second mentioned cams arranged to move the second mentioned cam out of clutch with the cable, simultaneously
10 with the movement of the first mentioned

cam into gripping engagement with the cable.

In testimony whereof we affix our signatures in presence of two witnesses.

THOMAS J. GILLOON. [L. S.]

JOHN F. HUBER. [L. S.]

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
