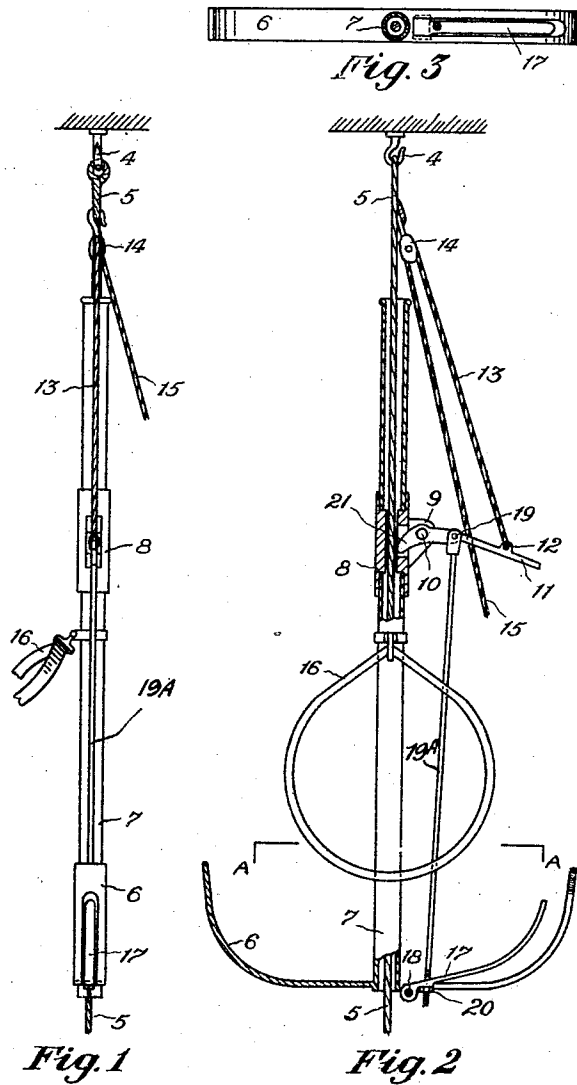


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INDIVIDUAL FIRE ESCAPE
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INDIVIDUAL FIRE ESCAPE

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This invention relates to an individual fire escape, and has for its object the provision of a simple device whereby a person may descend safely from one of the upper floors of a building without assistance, or can be lowered if incapable of operating the device, by assistance from the ground or from the building.

The invention consists of a steel cable which is attached by its upper end to a stud, hook or other anchorage in or near the top of a building, and hangs vertically within convenient reach of the windows until it reaches the ground, carrying a tubular sliding guide to which is secured a curved cross-bar forming a seat, a strap for securing a person to the seat, and a friction producing cam operated by a handle or lever arranged to be conveniently operated by the person using the device for descending from the building.

Means are also provided for operating the aforesaid cam lever whereby the cam is kept in contact with the cable, and the tubular guide is thereby prevented from moving by the weight of the person using the device, so that a person in an insensible or injured condition can be placed upon the seat and secured thereto by the strap, the weight of said person automatically clamping the guide and seat to the cable until the cam is released by another person operating the cam lever. This may be done by means of a rope or cable secured to the said lever, passing over a pulley near the point of suspension of the main cable, and thence passing to the ground. The seat and passenger may thus be lowered by a person standing on the ground and operating this rope, or it may be operated from any intermediate point, such as a window, balcony or platform as required.

The invention is more clearly described by means of the drawings herewith, which form a part of this application, and in which:

Fig. 1 is an elevation of the device showing the method of suspension.

Fig. 2 is a front view, partly in section.

Fig. 3 is a sectional plan on the line A—A in Fig. 2.

In these drawings the numeral 4 indicates a hook or similar member attached to any convenient upper part of a building, from which the device may be suspended, either temporarily or permanently.

The suspension cable is shown at 5, and is attached to the member 4 by means of an eye, thimble, shackle or similar device.

The descending carriage is in the form of a cross bar 6 secured to a tubular member 7, the latter having mounted upon it the friction device 8 which consists of a vertical slotted tube having lugs 9 on each side of the slot, which provide a fulcrum bearing 10 for the cam lever 11. The latter has a cable gripping cam 21 formed at the upper end, and also an eye 12 on the handle end for the attachment of the releasing cable 13, which passes over the pulley 14, secured to the upper end of the cable as shown, or to the hook 4 and the "fall" or loose end 15 of which is then led to the ground.

The safety belt 16 is for the purpose of securing a passenger to the seat.

One side of the cross piece 6 is slotted out for the purpose of accommodating the motion of a lever 17, which is pivoted at 18, and is connected by the rod 19A to a pin 19 in the cam lever 11. The rod 19A is made adjustable in length by means of the nut 20 at its lower extremity.

The device is operated by suspending the cable 5 from the support 4 and drawing the carrier up to the top by pulling upon the end 15 of the operating cable, the effect of the pull being to release the cam from contact with the cable 5 inside the tube, and free the carrier so that it can move along the cable. The upward motion of the cam lever 12 under the action of the rope 13 is to raise the

lever 17 into the position shown in Fig. 2, where it no longer coincides with the curved cross-bar.

The weight of the lever 17 and of the cam lever 12 is made sufficient to overcome the weight of the cable 15 and cause the cam 21 to grip the cable 5 sufficiently to support the carriage while a passenger is being placed upon it, and the act of a person being seated upon the cross-bars depresses the lever 17 and thus by means of the rod 19A and lever 12 causes the cam 21 to firmly grip the cable 8, thus securing the carriage and passenger to the cable.

The passenger can release the cam by pushing up the end 11 of the cam lever or the same object can be attained by pulling upon the cable 15, and this can be done either by the passenger or by another person if the passenger is unable through injury, to operate same.

The speed of descent can be varied by the pull upon the lever 12 or the cable 15 and thus the carrier and passenger can be safely and expeditiously lowered to the ground, or the carrier can be stopped at any intermediate point and the passenger removed.

The device can be returned to the top position by means of the cable 15, and the operation, if necessary, repeated.

Having now fully described my invention, what I claim and desire to be protected in by Letters Patent, is:

1. An individual fire escape device comprising, a cable suspended vertically from the top of an edifice and within reach of the walls thereof, a tubular member slidable on said cable, a longitudinal slot in said member, laterally projecting ears on each side of said slot parallel thereto and to each other, a pin secured transversely through said ears, a lever pivotal on said pin and curved adjacent its fulcrum to act as a cam for engaging said cable, a cross-bar secured to the lower extremity of said tubular member and adapted to form a seat, a lever of the second order shaped to correspond with said cross-bar seat and fulcrumed thereto, a connecting member between said seat lever and said cam lever whereby the leg of a person using the device necessarily engages the lower lever and thus secures the engagement of the cam of the top lever with the rope.

2. An individual fire escape device comprising, a cable suspended vertically from the top of an edifice and within reach of the walls thereof, a tubular member slidable on said cable, a longitudinal slot in said member, laterally projecting ears on each side of said slot parallel thereto and to each other, a pin secured transversely through said ears, a lever pivotal on said pin and curved adjacent its fulcrum to act as a cam for engaging said cable, a cross-bar secured to the lower extremity of said tubular member and

adapted to form a seat, a lever of the second order shaped to correspond with said cross-bar seat and fulcrumed thereto, a connecting member between said seat lever and said cam lever whereby the leg of a person using the device necessarily engages the lower lever and thus secures the engagement of the cam of the top lever with the rope, means for releasing the effect of said cam lever from the ground level by a cord and pulley.

In witness whereof I affix my signature.

FREDERICK E. TUCKER.