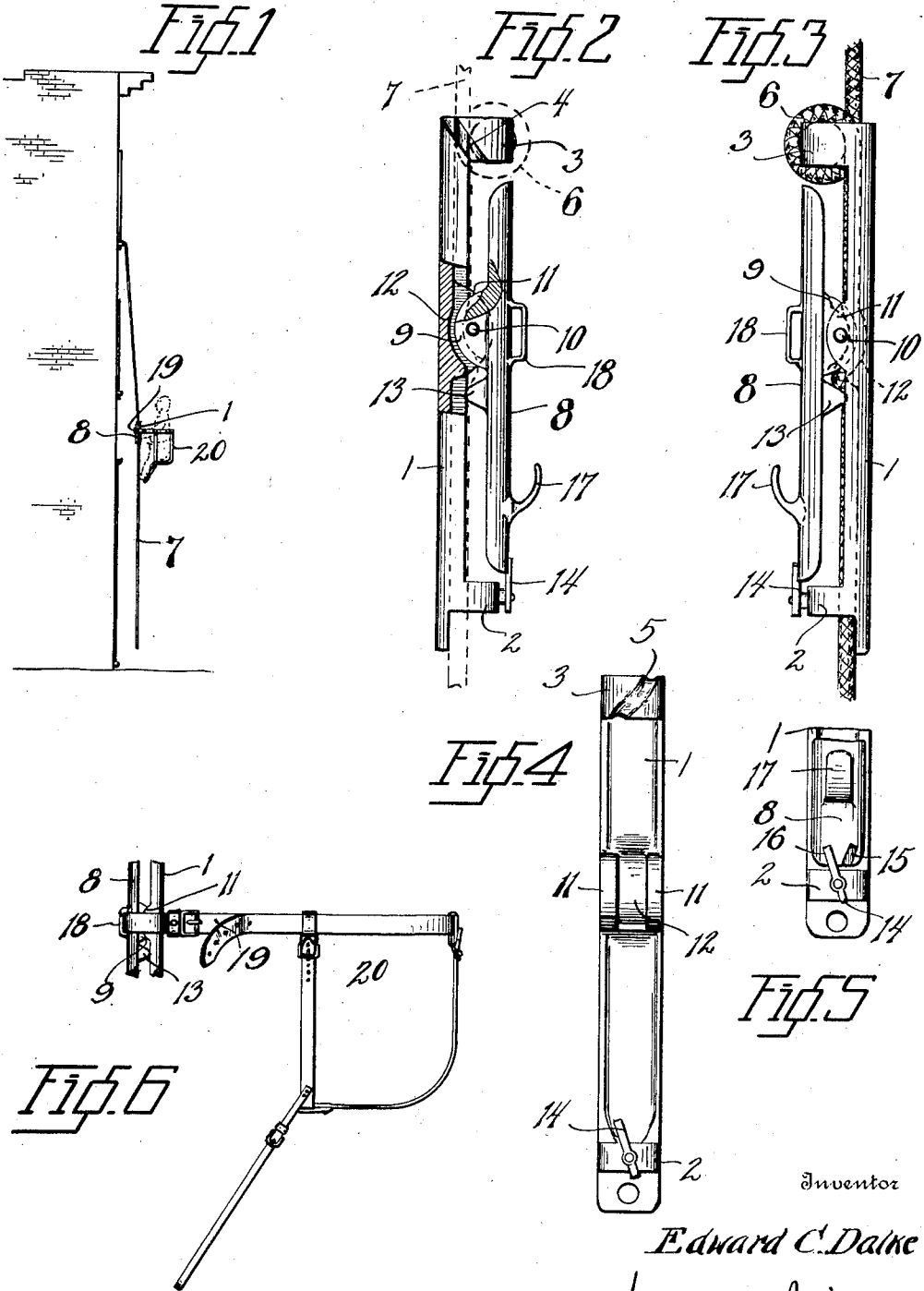


E. C. DALKE.
FIRE ESCAPE.
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1,357,962.

Patented Nov. 9, 1920.



Inventor

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UNITED STATES PATENT OFFICE.

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FIRE-ESCAPE.

1,357,962.

Specification of Letters Patent.

Patented Nov. 9, 1920.

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To all whom it may concerns

Be it known that I, EDWARD C. DALKE, a citizen of the United States, residing at Spokane, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification.

The present invention relates to improvements in fire escapes involving the use of rope brakes of the tortuous and grip type, with a rope.

The primary object of the invention is the provision of a device of this character that may be carried with facility by the traveling public, and be quickly applied and made ready for use when required, and which will be effective and efficient in performing the functions for which it is intended.

The invention is of that type in which a braking device is applied to a dangling rope and the device is permitted to slide over the rope under the weight of the person descending, the necessary braking being applied, frictionally, to prevent rapid or too rapid descent or fall of the person using the device. By the utilization of the device according to the present invention a second application may readily be provided for and the device, to this end, may be quickly detached from the rope and is ready for a second service if needed. Certain novel combinations and arrangements of parts are utilized to render the operation and construction of the device quite simple, and the minimum number of parts together with the compact arrangement thereof, render the apparatus facile and durable in use.

In the accompanying drawings one complete example, and an additional exemplification of the device, are illustrated, constructed according to the best mode so far devised for the practical application of the principles of the invention, and showing how the device may be used either for a person to grasp in the hand while descending, or to which a body harness may be attached to support the person descending.

Figure 1 is a diagrammatic view showing the device in use as a fire escape and a person escaping from the building supposed to be on fire.

Fig. 2 is an enlarged side elevation of the device, partly broken away, for convenience of illustration.

Fig. 3 is a view similar to Fig. 2, from the opposite side of the device, showing the rope in full lines.

Fig. 4 is a face or edge view of the body of the device, the friction lever omitted.

Fig. 5 is a fragmentary view at the lower end of the device showing the locking button engaging the friction lever bar.

Fig. 6 is a side view of a body harness that may be used in conjunction with the apparatus as shown.

The invention in its preferred form is a device of relatively small dimensions adapted to be carried in a grip or traveling bag, and is also comparatively light in weight, involving in its construction, essentially, the rounded metallic channeled bar 1 having at its lower end a closed ring or sleeve 2, and at its upper end an open ring or guide sleeve 3. The upper open ring has therein an inclined slot 4 and an exterior diagonal groove 5, the latter to accommodate the "turn" or kink 6 in the rope 7 and the former to permit the removal of the rope from the ring to straighten out the kink or turn so that the device may be ready for use again without being entirely removed from the rope.

In conjunction with the channel bar 1 forming the body of the device, a friction lever bar 8 pivoted to said channeled bar is also used, arranged parallel with the channel bar and fashioned with a projecting lug 9 that is grooved exteriorly, and perforated for the pivot pin 10 which is also passed through the two perforated ears 11 on the channeled bar 1. Adjacent the pivot point of these parts, the channeled bar is recessed as at 12 and this curved depression accommodates the rope as it is guided by the grooved lug 9.

Directly below the pivot point and in close proximity thereto is provided a friction boss or lug 13 on the lever bar 8 and this lug is adapted to frictionally engage and ride over the surface of the rope 7 as the device through its channeled bar slides down the rope. Due to the close proximity of the boss to the pivot point or fulcrum, the leverage is great and the lever bar, when grasped in the hand causes the boss or lug to frictionally engage the rope to retard the movement of the device on the rope or to stop it altogether, if desired. The retarding action or braking action is accomplished

through the "turn" or kink at the top of the device, but the boss 13 is depended upon to provide the required friction and render the device operative.

5 In order to hold the lever bar in close frictional contact, through its boss, with the rope a turn button 14 is pivoted on the ring 2 at the lower end of the channel bar, and this button is adapted to engage either of 10 the sockets 15 or 16 near the lower end of the lever bar to retain the bar in position. The sockets are of different depths, and therefore when the button is turned to one or the other sockets the lever is applied with 15 different degrees of friction. A hand guide 17 is provided for the lever bar so that when the device is grasped by the hands this guide assists in the hand hold. The utility of the device is apparent, it being only necessary 20 to state that with the rope looped around the open ring 3 and passed through the channeled bar under the lever, the device may be grasped with both hands, below the pivot point, and then the device is permitted 25 to slide down the rope, the speed of descent being governed by the pressure of the lug on the rope as the device slides, and this pressure, if necessary, may be varied by releasing or partially releasing the lever, or 30 by more tightly grasping the channeled bar and lever in both hands.

When the device is to be used for bodily supporting a person, the loop 18 is utilized, the strap 19 of the harness 20 being passed through the loop and the harness, which is 35 thus suspended from the device, may be used to support those who cannot support themselves by their hands holding upon the device.

The size of the device is such that it may 40 readily be grasped by the hands, and the hands are protected so that they cannot come in contact with the rope as the device slides over the rope, and the device may readily be detached from the turn or kink 45 (but not from the rope) and used again by freeing the kink through the slot 4 in the upper ring.

I claim—

The combination in a traveling device for 50 use upon rope fire escapes, of a channeled bar, a friction lever bar parallel with and pivoted to said channeled bar, having below said pivot an inwardly projecting friction lug, a hand guide device below said 55 lug, a closed ring at the bottom of the channeled bar, and a turn button fast upon said ring cooperating with sockets at the bottom of the friction lever in frictional engagement with the rope.

In testimony whereof I affix my signature.
EDWARD C. DALKE. 60