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PATENTED SEPT. 17, 1907.

W. B. PURDY.
FIRE ESCAPE.

APPLICATION FILED APR. 25, 1906.

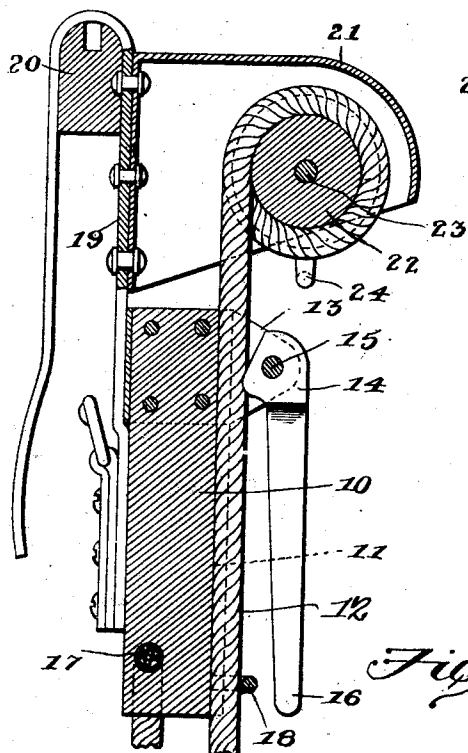


Fig. 1.

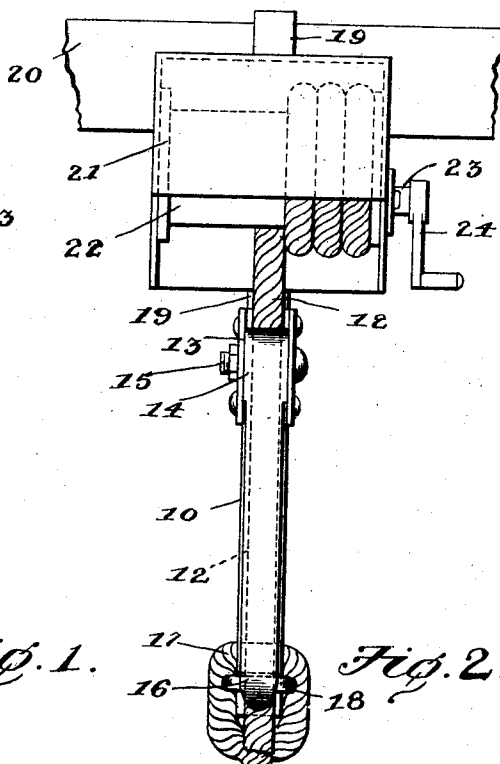
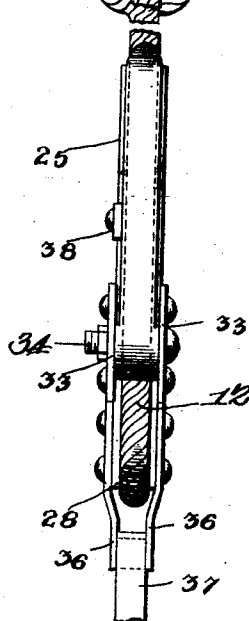
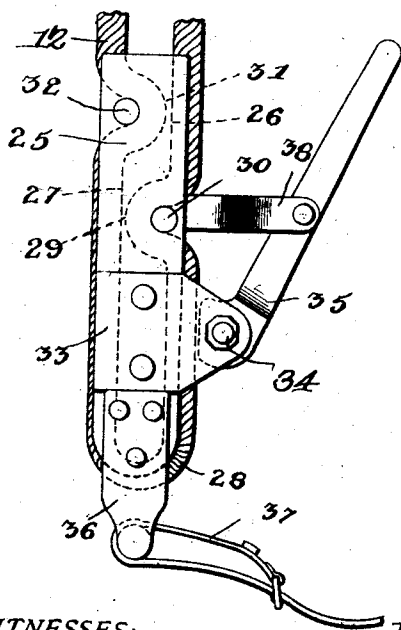


Fig. 2.



WITNESSES:

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FIRE-ESCAPE.

No. 866,516.

Specification of Letters Patent.

Patented Sept. 17, 1907.

Application filed April 25, 1906. Serial No. 313,697.

To all whom it may concern:

Be it known that I, WILLIAM B. PURDY, a citizen of the United States, residing at Corsica, in the county of Jefferson and State of Pennsylvania, have invented
5 a new and useful Fire-Escape, of which the following is a specification.

This invention relates to fire escapes, or devices for enabling persons to escape from burning buildings, and has for its object to improve the construction and
10 increase the efficiency, safety, and utility of devices of this character.

With these and other objects in view which will appear as the nature of the invention is better understood, the invention consists in certain novel features
15 of construction as hereafter fully described and claimed.

In the accompanying drawings forming a part of this specification and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of the embodiment of the
20 invention capable of carrying the same into practical operation.

In the drawings:—Figure 1 is a sectional view of the improved apparatus. Fig. 2 is a front elevation of the same.

25 The improved apparatus comprises in general a portion having means for attachment to the building, preferably in a window opening, a rope or cable connected to said suspending means, a winding drum or windlass for disposing of the cable, a controller carried
30 by the suspending means operative by a person in the room, a support for the person using the device, and a controller operative by the person descending.

The improved device comprises more particularly a block or head member 10 having a longitudinal
35 groove 11 in one side in which the cable or rope 12 employed to support the persons bears.

The head member 10 is provided with a socket plate 13 at one end in which a cam lever 14 is pivoted at 15, the cam lever adapted to compress the rope or cable
40 tightly into the socket 11, and thus lock the block firmly to the cable, or to permit the block to slide upon the cable, the extent of pressure being easily controllable by the extent of the force applied to the free end 16 of the cam lever.

45 The block 10 is provided near its lower end with an aperture or other means for coupling one end of the cable as at 17, it also carries a guide loop 18 near the free end 16 of the cam lever, to prevent lateral displacement of the cable, the guide loop being sufficiently large to permit the free movement of the cable
50 when the cam lever is released.

The block 10 is provided with a strap 19 preferably of leather or other suitable material, and adapted to be engaged with some stationary portion of the building from which the person desires to escape, as for
55 instance, one of the bars of one of the sashes of the

window, the glass having been broken therefrom, and indicated at 20.

Attached to the strap 19 is a casing 21 having a winding drum 22 mounted thereon upon a shaft 23, the
60 latter provided with a winding crank 24, the rope or cable 12 being connected at one end to the drum, and at the other end to the block 10 at 17, as before stated.

Slidably disposed within the loop or "bight" of the cable is a block 25 having grooves 26—27 in its opposite edges to receive the opposite sides of the cable 12, the lower end of the block being rounded at 28 to form
65 a guide for the cable.

The groove 26 is provided with a depression 29, and with a pin 30 extending transversely through this depressed portion, while the groove 27 is provided with a
70 similar depression 31 through which a pin 32 passes.

The cable 12 is threaded through the depressions 29 and 31, and behind the pins 30—32, thereby materially increasing the friction, and preventing undue rapidity
75 of descent, as hereafter explained. Attached rigidly to the block 25 are side plates 33 having a transverse pin 34 upon which a cam lever 35 is pivoted and adapted to bear against the cable 12 within the channel 26, and thus provide means for either locking it firmly to the
80 block, and preventing movement thereof, or to serve as a brake to control the movement as hereafter explained.

The block 25 is provided with a clevis 36 from which the suspension straps or harness 37 to support the person using the device, is supported.
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The whole device thus described when detached from the building and the cable wound upon the drum, and the two blocks 10—25 with their attachments disposed in close proximity, will occupy a comparatively
90 small space, and can be disposed in relatively small space or be packed in a trunk or other receptacle employed by the occupant of the room.

When a fire occurs if two or more persons are occupying the room, the strap 19 is connected to a suitable support, as above described, the harness 37 attached to one
95 of the persons who is then lowered to the ground by permitting the cable to run from the windlass or drum 22, one of the persons in the room controlling the descent by pressure applied to the cam lever 14—16, or a person descending may readily control the speed of the descent
100 by operating the lever 35, which is within his reach, as will be obvious.

When one person has descended, the occupant of the room winds up the cable by the crank 24, and the operation is repeated as often as may be required, or as many
105 times as there are persons in the room. The last person to descend controls the descent by means of the cam lever 35. By this simple means any number of persons may descend by the apparatus, and where two or more persons are in the room and require to use the apparatus, the more timid persons may be greatly assisted in
110 the descent by the stronger persons, or each person may

control the descent for himself if he prefers. The blocks 10 and 25 are preferably of wood, of suitable size to afford the requisite strength, while the other parts, except the cable or rope, are of metal, and the rope may also be of metal, if preferred.

When the device is disposed in a room as a part of the furnishings to be used in event of a fire, the cable may be of metal, but when the device is arranged for the use of travelers, and to be carried by them with their other baggage or belongings, the lighter manila or hemp rope will be preferable. A stop button 38 may be attached to the cam lever 35, to hold the same out of contact with the cable, to prevent the locking action with the cable, and thus providing a simple means whereby the descent is controllable only from the upper end of the apparatus, or from the room from which the descent is being made.

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

1. In a fire escape, a relatively fixed block having flexible means for attachment to a stationary structure, a winding drum fixed to said flexible attachment associated with said block, a cable connected at one end to said block and at the other end to said winding drum, a grip mechanism connected to said relatively fixed block and arranged to be operated at the point of attachment of the device, a movable block disposed in the bight of said cable, a support for the person descending connected to said movable block, and a second grip mechanism carried by

said movable block and operating upon the cable passing thereover. 30

2. In a fire escape, a block having means for attachment to a stationary structure, a winding drum associated with said block, a cable connected at one end to said block, a grip mechanism connected to said block and operating upon the cable passing thereover, a block movably disposed in the bight of said cable and having grooves in its opposite edges to receive the cable and with depressions in said grooves and brake pins disposed transversely of said recesses and around which the cable is threaded, the supporting means for the person descending suspended from said movable block, and a grip mechanism connected to said movable block and operating upon the cable disposed thereover. 35 40

3. In a fire escape, a block having means for detachable connection to a stationary structure, a cable connected at one end to said block and passing over the surface of the same, a clamp mechanism carried by said block and operating against the cable bearing thereover, a block movably disposed in the bight of said cable, a clamp mechanism carried by said movable block and operating on the cable passing thereover, a stop carried by said last-mentioned clamp mechanism for holding the same in inoperative position, and supporting means for the person descending carried by said movable block. 45 50 55

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIAM B. PURDY.

Witnesses:

J. E. CARROLL,
H. A. CYPHERT.