

M. EKMAN.
FIRE ESCAPE.

APPLICATION FILED MAR. 23, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

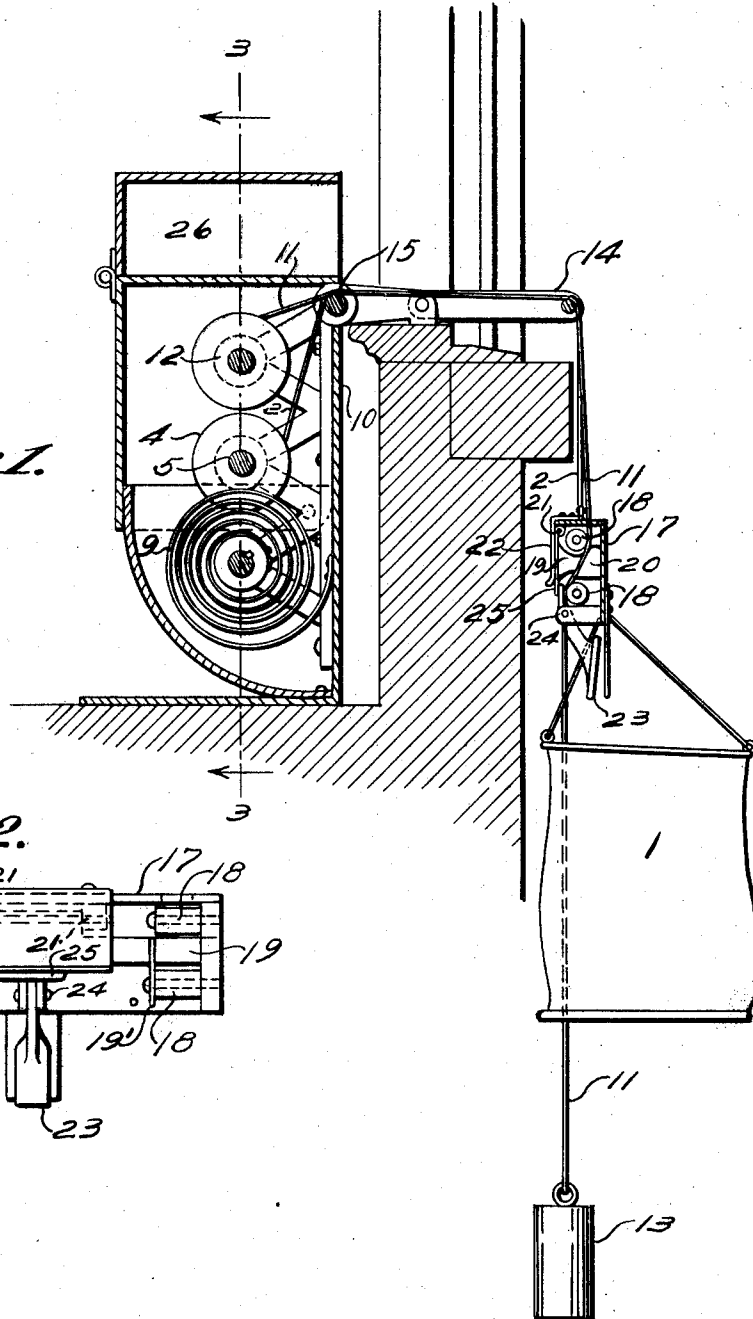
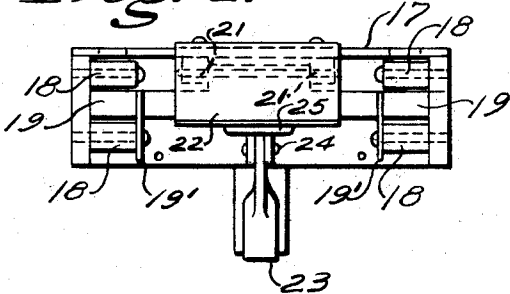


Fig. 2.



Witnesses:

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Blanche Michael*

Inventor,

*Moritz Ekman
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his Attorneys.*

No. 736,947.

PATENTED AUG. 25, 1903.

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FIRE ESCAPE.

APPLICATION FILED MAR. 23, 1903.

NO MODEL.

2 SHEETS—SHEET 2.

Fig. 3.

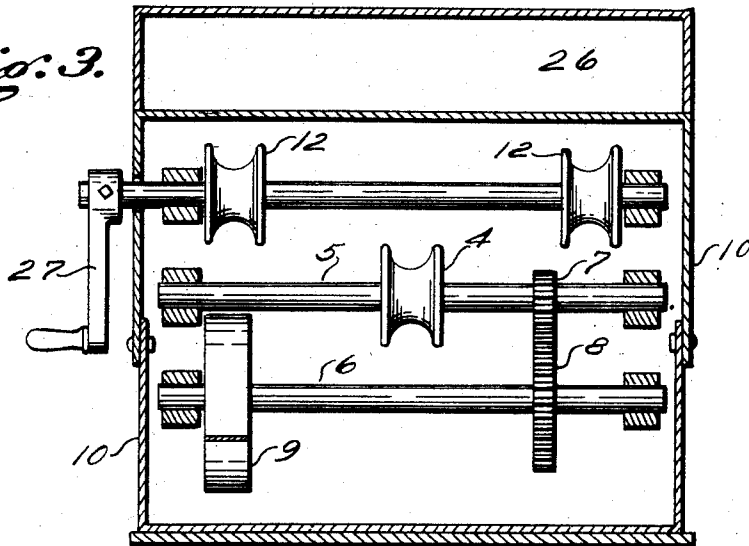
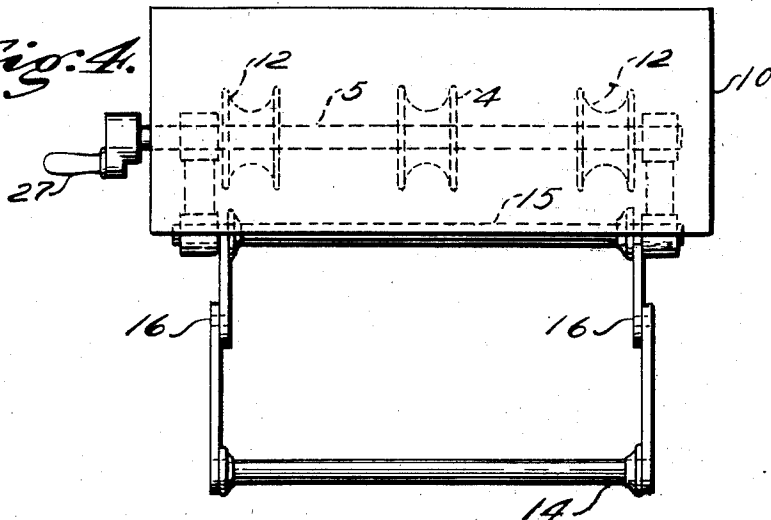


Fig. 4.



Witnesses:
Rudow Rummel
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UNITED STATES PATENT OFFICE.

MORRITS EKMAN, OF CHICAGO, ILLINOIS.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 736,947, dated August 25, 1903.

Application filed March 23, 1903. Serial No. 149,156. (No model.)

To all whom it may concern:

Be it known that I, MORRITS EKMAN, a citizen of the United States of America, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification.

The main objects of my invention are to provide an improved fire-escape having a basket or carriage arranged and connected to be lowered from a window and provided with improved means for automatically returning the carriage after its descent and to provide an improved braking means for regulating the speed of the descent. I accomplish these objects by the device shown in the accompanying drawings, in which—

Figure 1 is a side elevation, partly in section and showing the device ready for immediate use. Fig. 2 is a rear elevation of the brake used in connection with this device. Fig. 3 is a section on the line 3 3 of Fig. 1, showing the arrangement of the pulleys, gears, and spring, hereinafter described. Fig. 4 is a top plan, the car and brake being omitted.

In the construction shown the passenger carriage or basket 1 is suspended from the casing 10 by the rope 2, which is wound around the drum 4. The drum 4 is rigidly secured to the shaft 5. The shaft 5 is connected to the shaft 6 through the gears 7 and 8. Coiled around the shaft 6 is a spring 9, having one end rigidly secured thereto and its other end rigidly secured to the casing 10. The device is provided with two guide-ropes 11, which are secured to the reel 12 and weighted at 13. The projecting arm 14 provides suitable bearings for the ropes 2 and 11 in passing over the window-sill. The arm 14 is journaled on the shaft 15 and is hinged at 16 for convenience in storing. The basket 1 is provided with a brake 17, adapted to engage the guide-ropes 11. Each of the ropes 11 passes between two idle rollers 18 in the brake-casing 17. The brake-casing 17 is provided with a spring-pressed cross-piece or block 19, which normally presses the ropes 11 against the blocks 20. The cross-piece 19 is fulcrumed at 21 and is urged toward the blocks 20 by the spring 22. The lever 23, fulcrumed at 24, is adapted to engage a projection 25 of the block 19. The

block 19 is provided with two guide-pieces 19', which prevent the ropes 11 from slipping off of the rollers 18.

The operation of the device shown is as follows: When not in use, the carriage, brake, and arm 14 are folded back into the compartment 26 of the casing 10. The ropes 11 are wound on the pulleys 12 by means of the crank 27. In using the device it is first placed before the window and the arm 14 is extended over the sill. The weights 13 are lowered to keep the guide-ropes 11 in their proper position. The carriage being placed outside of the window, as shown in Fig. 1, is lowered by the user by releasing the grip of the brake on the guide-ropes 11 by means of the lever 23. After being lowered the carriage 1 is drawn back into place by means of the spring 5 and its geared connection to the drum 4, upon which the rope 2 is wound.

It will be understood that some of the details of the construction shown may be altered without departing from the spirit of my invention. I therefore do not confine myself to such details, except as hereinafter limited in the claims.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A fire-escape, comprising a casing having a drum journaled therein and carrying a coil of rope; a passenger-car suspended from said coil of rope and adapted to be lowered thereby; a spring in said casing acting upon said drum so as to normally wind up said coil; a reel journaled in said casing and carrying a guide-rope adapted to be lowered along the course of said car independently of the descent of the car; a foldable arm arranged to be folded into said casing and to be extended outwardly for guiding and supporting said ropes; and braking means secured to said car, operative from the car, and acting on said guide-rope, substantially as described.

2. A fire-escape, comprising a passenger-car with means for suspending and lowering same; a brake-casing secured to said car having journaled therein a pair of antifriction-rollers, and secured therein a pair of blocks between said rollers and normally urged toward each other; a guide-rope suitably secured at its upper end, passing downwardly

on one side of one of said antifriction-rollers, thence between said blocks and on the opposite side of the other antifriction-roller, and extending downwardly along the course of said car; and means for separating said blocks, substantially as described.

3. A fire-escape, comprising a passenger-car with means for suspending and lowering same; a brake-casing secured to said car, having journaled at each side thereof a pair of antifriction-rollers; a movable cross-piece extending across the casing and between each pair of said rollers; a block secured to said casing between each pair of said rollers and opposed to said cross-piece; means for nor-

mally urging said cross-piece toward said blocks; a pair of guide-ropes suitably secured at their upper ends, each extending downwardly between one pair of said rollers and engaged by its block and said cross-piece and extending downwardly along the course of said car; and means for releasing said cross-piece from pressure upon said guide-ropes, substantially as described.

Signed at Chicago this 20th day of March, 1903.

MORRITS EKMAN.

Witnesses:

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