

R. KORB.
FIRE ESCAPE.
APPLICATION FILED NOV. 22, 1907.

918,333.

Patented Apr. 13, 1909.
2 SHEETS—SHEET 1.

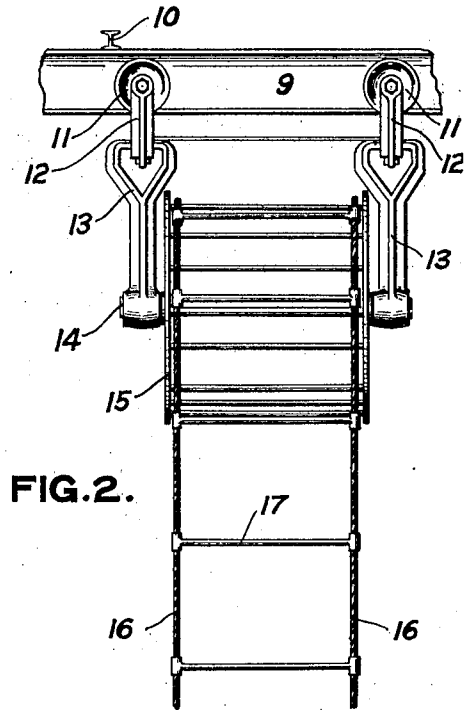
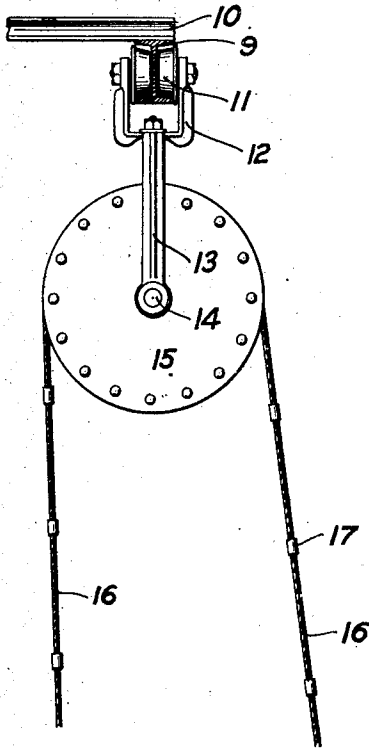


FIG. 2.

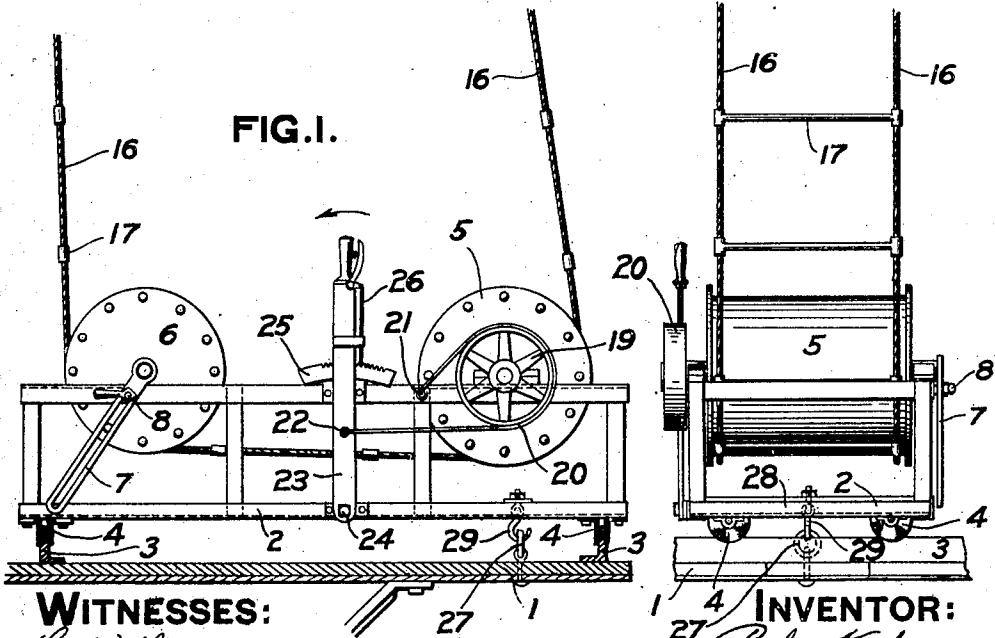


FIG. 1.

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FIG. 3.



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UNITED STATES PATENT OFFICE.

ROBERT KORB, OF ROCHESTER, NEW YORK.

FIRE-ESCAPE.

No. 918,333.

Specification of Letters Patent.

Patented April 13, 1909.

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To all whom it may concern:

Be it known that I, ROBERT KORB, a subject of the Emperor of Germany, and a resident of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification.

This invention relates to fire escapes, and its object is to produce an apparatus capable of being moved from one place to another around the outside of a building, whereby people may escape to the ground from any part of the building swiftly and safely.

In the drawings:—Figure 1 is a side or end elevation of the apparatus; Fig. 2 is a front elevation of the same; and Fig. 3 is a perspective view of a building, showing the apparatus in place.

A platform 1 is fixed to the building just above the window of the first story (Fig. 3), and extends around it on at least two sides. Said platform is of sufficient width and strength to support a car 2, which may be built of structural steel (Fig. 2). Rails 3 forming a track are laid on the upper side of the platform 1, and fit into flanged rollers 4 on the bottom of said car, enabling the latter to be readily pushed from one end of the building to the other, and even around the corner, the rails being properly curved to permit the turn. Drums or cylinders 5 and 6 are revolvably supported on the car 2. The drum 5 is supported in fixed bearings, and the drum 6 is supported between a pair of slotted links 7, by means of which its position with reference to the car and the drum 5 may be altered. Hand nuts 8 lock the said links in the desired position. Near the top of the building is another track which extends around it on two or more sides. Said track may be built of structural steel, such as an I-beam 9, and may be permanently fastened at a suitable distance from the walls upon brackets 10. Wheels or rollers 11, each pair of which is revoluble in a frame 12, are adapted to run on the lower flange of the I-beam 9. From said frames 12 depend hangers 13, and between said hangers is fixed a shaft 14. A drum 15 is revoluble upon this shaft, and is normally directly above the car 2.

The escape ladder comprises a pair of endless cables 16, to which rungs 17 are fastened at regular intervals. The said cables pass over the drums 5, 6, and 15, forming, in

effect, a belt, the tension of which may be adjusted by means of the slotted links 7.

At suitable points around the platform 1 are counter-weighted ladders 18 (Fig. 3) operated in the same manner as the lower ladders on the ordinary stairway type of fire-escape. Normally these ladders are up, but when a fire breaks out, they may be readily dropped, thus giving people on the ground access to the platform 1, and vice versa. When people or firemen reach the said platform (either from the ground or from the interior of the building), they may rush the car 2 along the rails 3, until it is in line vertically with the upper window out of which people are trying to escape. The hangers 13 and the drum 15 will follow along upon the upper track, because of the cable ladder 16 connecting said drum and the car below. As soon as people above grasp the inner rungs of the ladder, their weight will carry them to the platform below, the cables 16 meanwhile running on the drums 5, 6, and 15, like a belt on grooved pulleys. As soon as one person is down, more rungs will, of course, be in place for other people to grasp. If more than two or three people were hanging upon the ladder at one time, their combined weight might cause a too rapid descent, resulting in injury to one or all of them. A brake is therefore provided, which may be operated by a fireman or other person upon the platform when required. Said brake comprises a pulley 19, around which is passed a flat leather or metal band 20. The band 20 is fastened at one end to a pin 21 fixed in the frame of the car 2, and at the other end to a pin 22 on an upright lever 23 that is pivoted at its lower end 24 to the said car-frame. A notched quadrant 25 may be fastened to the car, if desired, and a latch 26 to cooperate therewith may be attached to the lever 23, for the purpose of holding said lever in any desired position. Movement of the lever in the direction of the arrow (Fig. 1) tightens the band 20 upon the pulley 19 and retards the movement of the drum 5 and therefore of the ladder 16 to an extent proportionate to the power exerted upon said lever. To prevent the lifting of the outer end of the car 2, (which possibly might occur were the brake thrown on suddenly) resulting in the loosening of the ladder 16, means are provided for fastening said outer end of the car to the platform 1. In line with each row of windows in the building, a ring-bolt 27 is set in said platform 1. On

the lower frame of the car 2 is a crossbar 28, to which is bolted a hook 29 in such a position that it may be slipped into the ring of the said ring-bolt 27 when directly over the latter. This is done by the persons manipulating the device. If the car then tends to tilt upward, the engagement of the said hook and ring prevents such movement, and furthermore holds the car stationary upon the rails 3. If people are at any other window, the apparatus can be pushed to a point in line therewith, and used as just described. As soon as a person reaches the platform 1, he can climb down any one of the ladders 18 to the ground.

What I claim is:

1. In a fire escape, the combination of a building, a horizontal upper track carried by the building; a carriage running on said track; a drum hung from said carriage beneath said track; a horizontal lower track; a carriage running thereon; a pair of drums on the lower carriage, the first of which drums is set vertically beneath the drum on the upper track, and the second of which is set at a suitable distance from the first, one of said drums being adjustable to and from the other; a flexible endless ladder passing around the three drums, whereby the proper tension of the ladder may be obtained; means for fastening the carriage to the lower track at different points; and an adjustable brake mechanism for regulating the speed of movement of the ladder.

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2. In a fire escape, the combination of a building, a horizontal upper track carried by the building; a carriage running on said track; a drum hung from said carriage beneath said track; a horizontal lower track; a carriage running thereon; a pair of drums on the lower carriage, the first of which drums is set vertically beneath the drum on the upper track, and the second of which is set at a suitable distance from the first, one of said drums being adjustable to and from the other; a flexible endless ladder passing around the three drums, whereby the proper tension of the ladder may be obtained; means for fastening the carriage to the lower track at different points; an adjustable brake mechanism for regulating the speed of movement of the ladder; a horizontal platform adjacent to the lower track; and a series of movable ladders extending from the platform to the ground.

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Witnesses:

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