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Patented Dec. 26, 1899.

J. COTTER.  
FIRE ESCAPE.

(Application filed Apr. 17, 1899.)

(No Model.)

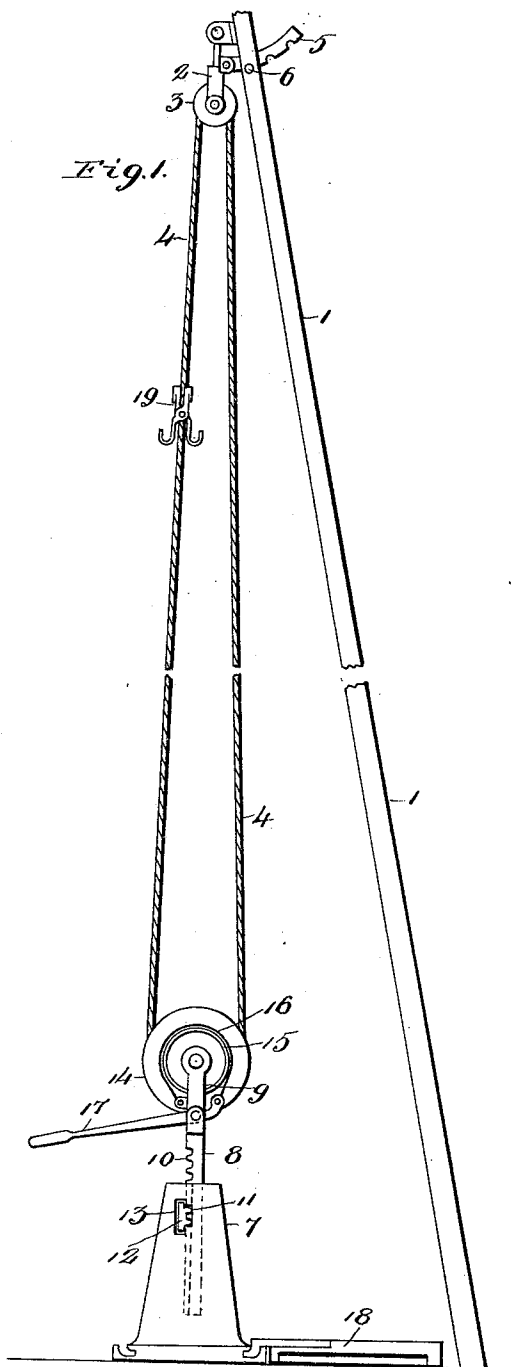


Fig. 1.

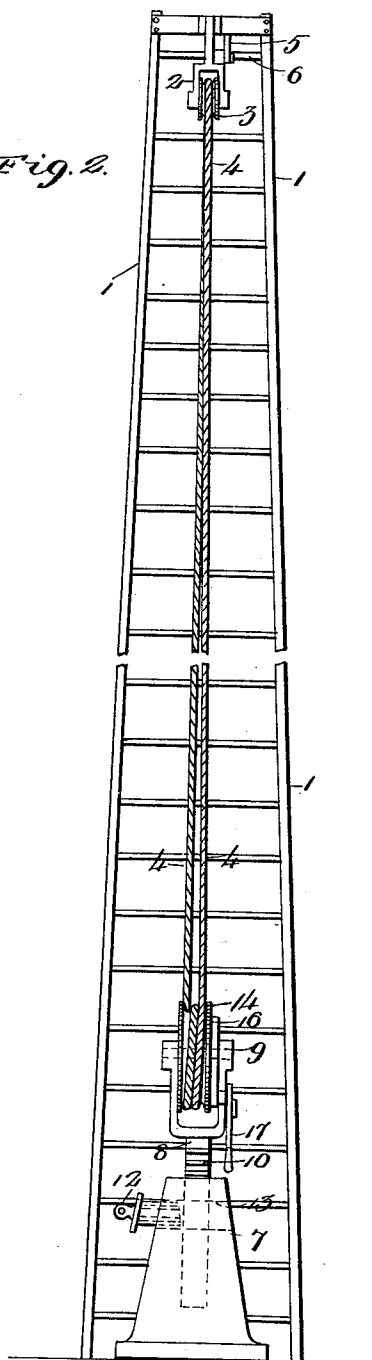


Fig. 2.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 640,099, dated December 26, 1899.

Application filed April 17, 1899. Serial No. 713,385. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN COTTER, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Fire-Escapes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in fire-escapes; and it consists in the novel combination and arrangement of parts, as will be hereinafter more particularly described and claimed.

In the drawings, Figure 1 is a side elevation of my complete invention, and Fig. 2 is a front view of the same.

The object of my invention is to construct a simple and practical portable fire-escape which may be conveniently carried upon a truck or other vehicle and which may be quickly placed in position for use and is ready at all times to convey any number of people from the windows of the various floors of a building; and it consists in the employment of a ladder, a pulley carried by the upper end of the same, a windlass located adjacent to the ground or lower end of the ladder, an endless rope passed any number of times around said windlass and over said pulley, means for applying friction to said windlass and operating as a brake in order to govern the speed of the rope, means, or preferably hooks, secured along the rope or removably attached thereto which are adapted to be grasped by the persons desirous of leaving the building or for holding a sack or bag for receiving said persons, and in other details hereinafter to be described.

Referring to the drawings, 1 represents an ordinary ladder, which is placed in an inclined position, to the upper end of which is secured a pivoted fork 2, which suspends a pulley 3, over which the endless belt 4 is passed. Projecting from one side of the fork 2, or that adjacent to the ladder 1, is a curved bar 5, the lower edge of which is provided with teeth, which form spaces for the reception of the pin 6, secured to the ladder, whereby the said pulley is adjusted and held at a suitable distance from said ladder in

order to hold the endless rope in an operative position in respect to the ladder.

Removably placed upon the ground adjacent to the ladder is a pedestal 7, which is adapted to receive the lower end 8 of a fork 9, the said lower end being provided with teeth 10, which are adapted to coöperate with similar-shaped teeth 11, formed on the movable key 12, which is slidingly located in a transverse opening 13, formed in the side of the pedestal 7, whereby the fork 9 may be adjusted in a vertical direction within said pedestal and locked in any adjusted position by the inward and outward movement of said teeth, or, in other words, when it is desirous to adjust the said fork the key 12 is pulled out, and after the adjustment is made the same is forced inwardly, causing the teeth thereon to coöperate with the teeth 10 of the extension 8 of the fork 9, whereby the endless rope is drawn tightly and held in said position while the device is being operated.

The fork 9 is adapted to receive a drum 14, over which the endless rope 4 is wound any number of times to prevent slipping, and forms a windlass of the usual construction, and forming an integral part and located to one side of the said drum is a cylindrical extension 15, around which passes a metallic band 16, one end of which is attached to the fork 9 and having its opposite end secured to the short arm of a hand-operated lever 17, the latter being pivoted to one side of said fork, all of which operates to apply a sufficient amount of friction to the drum 14 while the same is in operation, and thus regulate the speed thereof.

Removably secured to the pedestal 7, adjacent to the base thereof, is a foot-board 18, upon which any number of persons may stand in order to hold the pedestal upon the ground and in its proper position while the device is in operation.

19 represents a grappling-hook which may be removably secured to the endless rope 4 or secured thereto permanently, as may be desired, which is adapted to be grasped by the hands of the persons desirous of leaving the floor of a building or is adapted to hold a bag or sack of any well-known construction, within which the person is adapted to be placed. Any number of hooks or similar

devices may be employed and attached to the rope either while the ladder is at rest or in operation, and consequently any number of persons may be removed from the various  
 5 floors of the building and deposited upon the ground on the outside of the building at one and the same time.

In carrying out my invention the windlass may be secured directly to the ladder adjacent to the lower end thereof, and, further,  
 10 the ladder may be carried upon a vehicle and the windlass secured to said vehicle.

In some instances a windlass may be employed which will carry a rope of suitable  
 15 length and around which it is wound, one end of said rope being attached to the windows and having its opposite free end passing over the pulley 3, whereby an endless rope is dispensed with and will operate in a like manner.  
 20

Having fully described my invention, what I claim is—

1. A fire-escape comprising a ladder, a pulley secured to the upper end of the same,  
 25 means for adjusting and holding the said pulley in its proper position, a windlass located adjacent to the lower end of the ladder, an endless belt passing over said windlass and pulley, and a brake for said windlass for regulating the speed of the rope, as and for the  
 30 purpose described.

2. A fire-escape comprising a ladder, a pulley secured to the upper end of the same, a pedestal located adjacent to the lower end of said  
 35 ladder, a windlass adjustably secured to said

pedestal, a brake for said windlass, an endless belt passing over the windlass and pulley, and hooks adapted to be secured to the said rope, as and for the purpose described.

3. A fire-escape comprising a ladder, a pulley secured to the upper end of the same,  
 40 means for adjusting the latter to and from the ladder, a pedestal adapted to be placed upon the ground, a fork having a lower toothed extension adapted to be received by  
 45 said pedestal, a key carried by said pedestal, and provided with teeth which are adapted to cooperate with the toothed extension, a drum carried by the said fork, a frictional  
 50 brake cooperating with said drum, an endless rope passing over said windlass and pulley, and a removable foot-board secured to the pedestal adjacent to its base, as and for the purpose described.

4. A fire-escape, comprising a suitable ladder, a fork pivoted to the upper end of the  
 55 same, a pulley carried by said fork, a curved bar secured to one side of the said fork, the lower edge of which is provided with teeth-forming spaces, a pin secured to the ladder,  
 60 adapted to be received by the said spaces, a windlass, and a rope passing from said windlass, and over said pulley, as and for the purpose described.

In testimony whereof I affix my signature  
 65 in presence of two witnesses.

JOHN COTTER.

Witnesses:

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ALFRED A. MATHEY.