

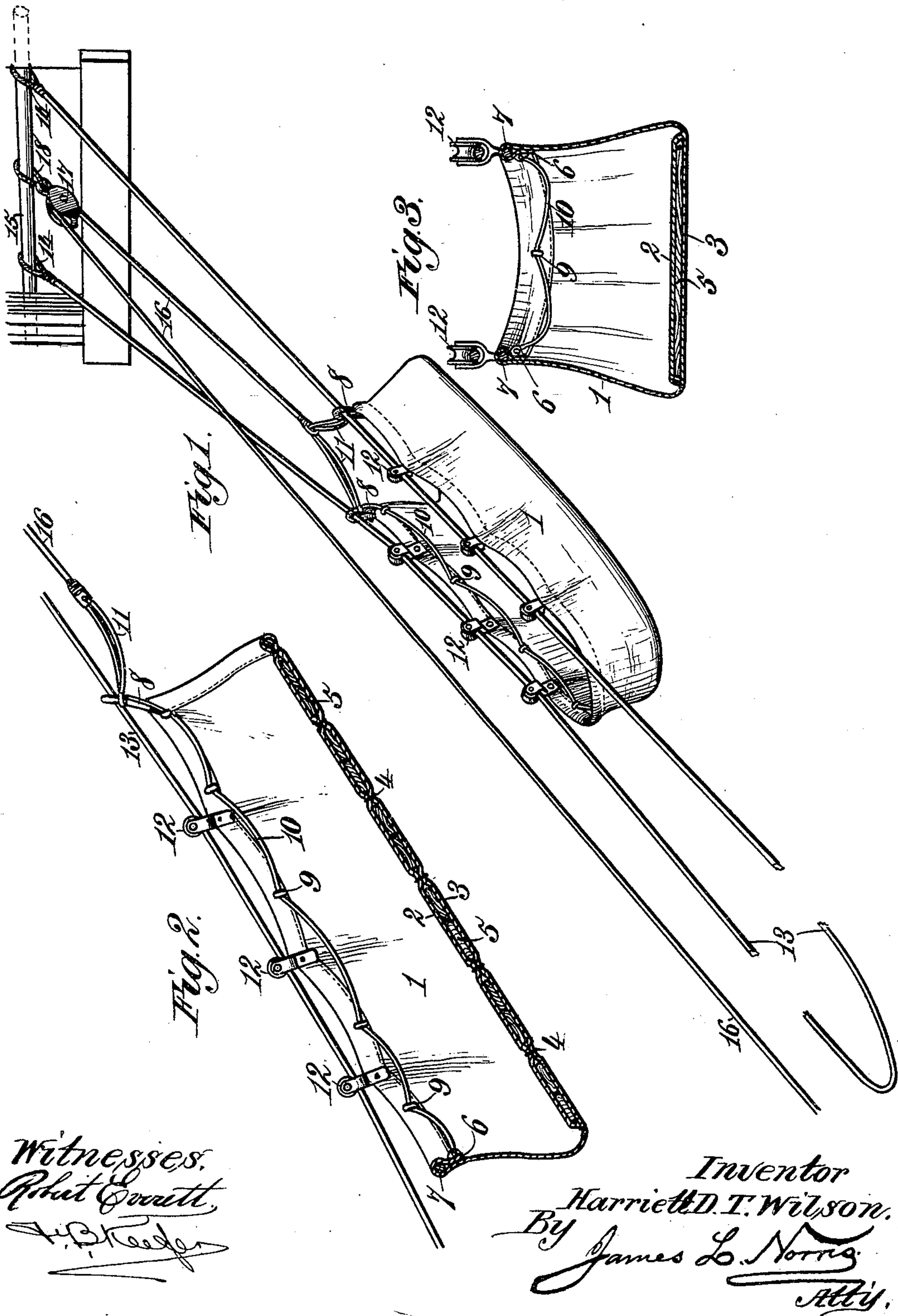
No. 636,605.

H. D. T. WILSON.  
FIRE ESCAPE.

Patented Nov. 7, 1899.

(Application filed June 12, 1899.)

(No Model.)



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 636,605, dated November 7, 1899.

Application filed June 12, 1899. Serial No. 720,231. (No model.)

*To all whom it may concern:*

Be it known that I, HARRIETT D. T. WILSON, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Fire-Escapes, of which the following is a specification.

This invention relates to fire-escapes, and particularly to that class of fire-escapes in which a cage or receptacle is adapted to be raised and lowered from a window on traction-ropes, forming ways on which the cage or receptacle travels; and it has for its object to provide a simple, inexpensive, safe, and reliable fire-escape of the type referred to having a flexible cage or receptacle that operates to closely embrace the person descending from the building, and thus prevent him from falling.

To these ends my invention consists in the features and in the construction, combination, and arrangement of parts hereinafter described, and particularly pointed out in the claims following the description, reference being had to the accompanying drawings, forming a part of this specification, wherein—

Figure 1 is a perspective view of my improved fire-escape in place on a building. Fig. 2 is a longitudinal view of the cage or receptacle, and Fig. 3 is a transverse section of the same.

Referring to the drawings, the numeral 1 indicates the cage or receptacle, comprising a sack or pouch made of stout canvas or other suitable flexible material and open at its upper end and at its upper side or edge, as shown. The bottom of the sack or pouch is made of double thickness or two plies of fabric 2 and 3, stitched or secured together transversely at regular intervals, as indicated at 4, forming a series of pockets in each of which is inserted a flat rectangular piece of wood 5 or other suitable rigid material. The plates or sheets 5 act as stiffeners which operate to form a firm and strong bottom to the sack or pouch and hold it distended, but being made in separate sections inserted in individual pockets the bottom of the sack or pouch is permitted to yield longitudinally to accommodate itself to the person and may readily be folded up into a compact form for storage or transportation. The edges of the upper

open side of the pouch or sack are folded or doubled back upon the fabric and secured thereto, as at 6, and through said doubled or folded edge is passed a rope 7, that projects beyond the upper end of the pouch and at its ends is formed into loops 8. Straps or loops 9 are attached to the inner sides of the sack or pouch adjacent to the edges 6, and through said straps or loop is passed a rope 10. Each end of the rope 10 is carried over to the opposite edge of the sack or pouch and is then fastened to the loop 8, whereby the rope 10 is doubled at the upper end of the sack or pouch, as indicated at 11. To each longitudinal side edge of the cage or car, composed of the flexible pouch or sack, is connected a plurality of separated guide-pulleys 12. These guide-pulleys travel on the two stretches of a traction-rope, consisting of a single rope 13, which is passed through the pulleys on one side of the pouch or sack and is then turned and passed through the pulleys on the other side, the ends of the said rope being formed into loops 14, that are adapted to be slipped over a bar 15 for the purpose hereinafter explained. To the center of the doubled portion 11 of the rope 10 is secured one end of a hoisting and lowering rope 16, which passes through a pulley 17, to which is attached a loop 18, also adapted to be slipped over the bar 15.

The operation of my device is as follows: To use the device, the loop 18 of the pulley 17 is slipped over the bar 15 to the center of the latter and the loops 14 on the ends of the traction-rope are slipped over the ends of the bar, after which the bar is arranged transversely on the inner side of the window-frame and the ends of the ropes and the pouch or sack thrown out the window. A person below secures the end of the doubled traction-rope to any convenient fixed object opposite the burning building—as, for example, a railing, hitching-post, lamp-post, or tree—or may be held by people on the ground, or where the street in front of the building is very narrow it may be carried through a window in a building on the opposite side of the street and there secured. The traction-rope having been secured in place, the pouch or sack is hoisted up by means of the rope 16 to the window. The traction-rope being a single



rope doubled as described and secured at its doubled end to the ground and at its ends near the ends of the bar 15, it follows that the two portions of the rope diverge or spread  
 5 apart from the ground up to the window. Hence when the pouch or sack is hoisted up to the window its sides are opened and distended by the pulleys traveling upon the traction-rope in readiness for the reception of the  
 10 person wishing to escape. The latter then grasps the rope 16 and steps into the sack or pouch and disposes himself in a sitting or reclining position therein. The weight of the person will operate to draw the two portions  
 15 of the traction-rope toward each other, thereby causing the sack or pouch to closely embrace or envelop him and prevent him from falling out. The rope 16 is now lowered away, permitting the pouch or sack to travel down  
 20 the traction-rope on its pulleys. After the person has stepped out of the pouch or sack the latter may be returned to the window by the hoisting-rope 16. The hoisting and lowering of the sack or pouch may be performed  
 25 either by the escaping person or by others on the ground, the latter method being of necessity employed in rescuing invalids and children.

When not in use, the entire device may be  
 30 folded up into a very small and compact parcel and stored or hung up in any convenient place.

It is evident that the traction-ropes may consist of two separate ropes, the lower ends  
 35 of which may be secured to the same fixed object; but for the sake of greater simplicity in using the device and to prevent confusion I prefer to make the traction-ropes of a single piece of rope doubled as described.

40 I have described the cage or receptacle as comprising a sack or pouch made of stout canvas or other suitable flexible material; but it may be made of rigid material—such as wire-netting, iron, steel, or the like—and  
 45 may be made of a sufficient capacity to carry two or more persons.

The invention may also be employed at summer resorts as a pleasure chute or car and also for conveying invalids from one point to another without injury.  
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Having described my invention, what I claim is—

1. The combination with traction-ropes, a device for connecting the ends thereof with  
 55 a building, and a pulley carried by said device, of a car or cage, a plurality of separated guide-pulleys connected to each longitudinal side edge of the car or cage and traveling on the stretches of the traction-rope, loops or  
 60 straps arranged near its edges, a rope passing through the loops or straps, and a hoisting and

lowering rope attached at one end to the rope passing through said loops or straps and running around the pulleys on said device and over the central part of the car or cage to be  
 65 controlled by a person therein, substantially as described.

2. The combination of the downwardly-converging traction-ropes, a cage or car having flexible sides, a plurality of guide-pulleys connected to each longitudinal side edge of the  
 70 cage or car and traveling on the converging traction-ropes, which as the cage or car descends, force the side edges of the cage or car toward each other over the person therein, a  
 75 device holding the upper ends of the traction-ropes spread apart, a guide-pulley engaged with said device, and a hoisting and lowering rope attached at one end to the cage or car running through the guide-pulley on said device and extending centrally over the cage or  
 80 car to be controlled by a person therein, substantially as described.

3. The combination of the downwardly-converging traction-ropes, a rigid bar for engaging  
 85 part of a building and by which the upper ends of the traction-ropes are held spread apart, a cage or car having flexible sides provided with roped upper edges formed into loops movably engaging the traction-ropes,  
 90 a plurality of guide-pulleys connected to each longitudinal side edge of the cage or car and traveling on the stretches of the traction-ropes, loops or straps near the edges of the cage or car, a rope passing through the loops  
 95 or straps and doubled at one end of the cage or car, a guide-pulley engaged with said rigid bar, and a hoisting and lowering rope attached at one end to the said doubled part of the rope passing through the loops or straps, running through the guide-pulley on the rigid  
 100 bar and extending centrally over the cage or car, substantially as described.

4. In a fire-escape, the combination with traction-ropes arranged to be secured to a  
 105 building and to a fixed support, of a flexible pouch or sack open at its upper side and end and provided with a plurality of transverse pockets in its bottom, rigid stiffening-pieces disposed in said pockets, pulleys secured to  
 110 the edges of the open side of the sack or pouch and arranged to travel on the traction-ropes, and a hoisting and lowering rope, substantially as described.

In testimony whereof I have hereunto set  
 115 my hand in presence of two subscribing witnesses.

HARRIETT D. T. WILSON.

Witnesses:

JENNIE KINNEY,  
 HENRY N. HURST.