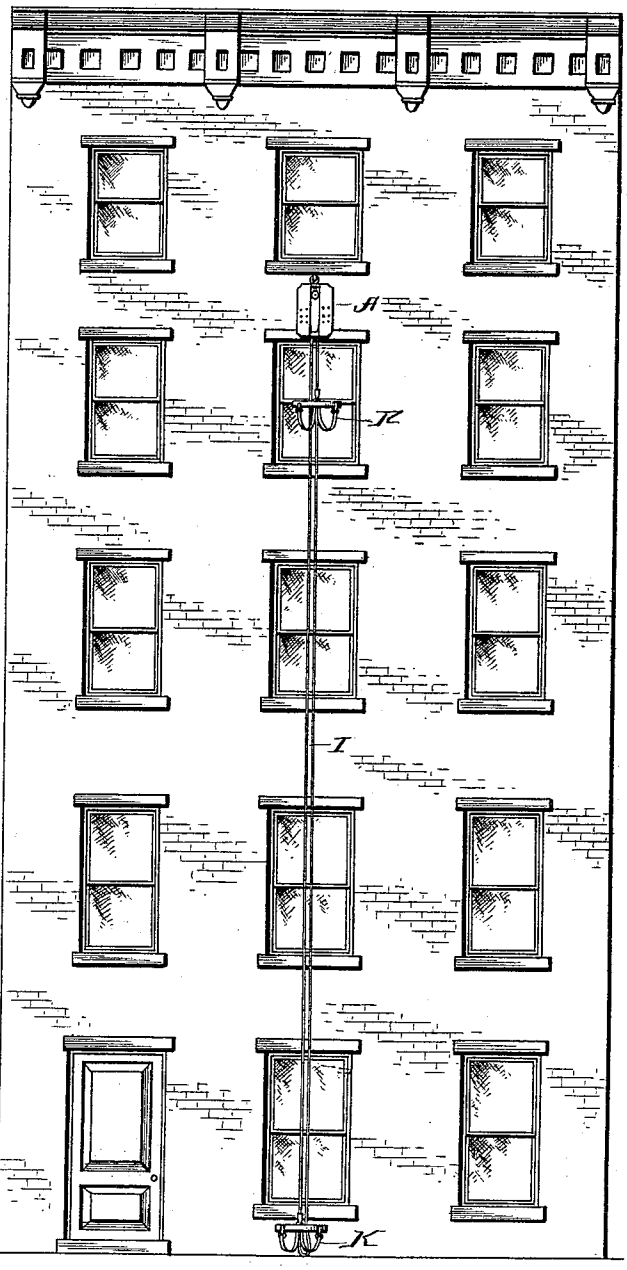
(No Model.) 2 Sheets—Sheet 1.

A. A. BADGER.

FIRE ESCAPE.

No. 481,923. Patented Sept. 6, 1892.

Fig. 1



Witnesses

E. C. Hardeman

D. P. Wolhampter

Inventor

By his Attorneys, A. A. Badger

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

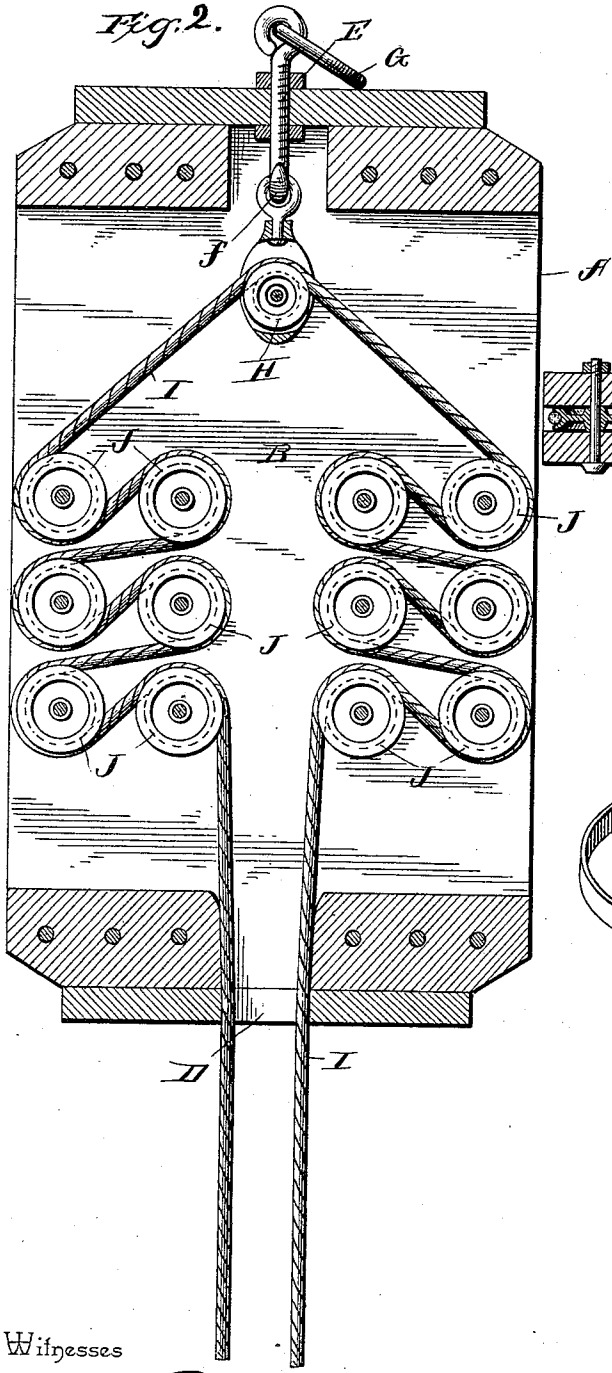


Fig. 3.

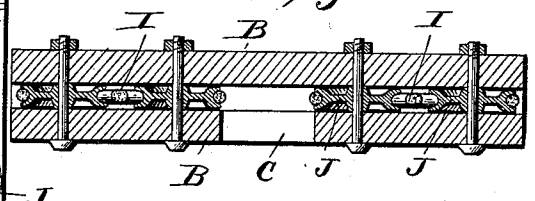
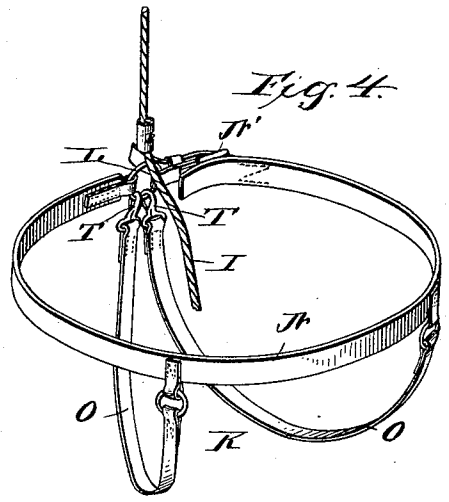


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE

ARGULAS A. BADGER, OF WINDSOR, MISSOURI, ASSIGNOR OF ONE-HALF TO SILVESTER J. COTTON, OF SAME PLACE.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 481,923, dated September 6, 1892.

Application filed April 30, 1892. Serial No. 431,267. (No model.)

To all whom it may concern:

Be it known that I, ARGULAS ALONZO BADGER, a citizen of the United States, residing at Windsor, in the county of Henry and State of Missouri, have invented a new and useful Fire-Escape, of which the following is a specification.

This invention relates to fire-escapes; and it has for its object to provide an improved fire-escape which can be readily suspended from any suitable point of attachment on a building, so that the persons therein in the event of fire can readily and rapidly descend to the ground without danger.

To this end it is the main object of this invention to improve upon fire-escapes of the character disclosed by this invention, and not only simplify the same but also to render the escape safer and more easily manipulated and controlled.

With these and many other objects in view, which will readily appear as the nature of the the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a front elevation of my improved fire-escape suspended from the window of a building. Fig. 2 is a vertical longitudinal sectional view of the device removed from the building. Fig. 3 is a horizontal sectional view of the rope frame or box. Fig. 4 is a detail in perspective of one of the body-supports.

Referring to the accompanying drawings, A represents a suitable rope frame or box comprising the opposite spaced plates B, clamped together at their ends so as to form an inclosed boxing or frame to accommodate the friction devices of the fire-escape. The said box or frame A is provided in the front thereof with the central vertical opening C, extending the entire length thereof and terminating at the lower end of the boxing in the rope-opening D, through which passes the endless fire-escape rope, to be presently described.

Secured in the top of the box or frame A is the supporting-bolt E, projecting into the frame and central opening therein and terminating in a hook F, while to the upper end of the same is secured the supporting-ring G, which is connected with any suitable point of attachment for suspending the frame or box from a window of a building or any other suitable point of attachment.

A main supporting-pulley H is suspended from the hook F within the top of the box or frame and the central opening therein and receives the top of the escape-rope I, passing thereover and extending from either side of the same around a series of grooved friction wheels or pulleys J, journaled within the box or frame on each side of the central longitudinal opening therein. The said friction-pulleys J are arranged in opposite pairs on each side of the central opening in said box or frame, one pair above the other, in any number desired, according to the rapidity with which it is desired for the escape-rope to descend under the weight of a person. The said wheels or pulleys J are sufficiently wide so as to closely fit between the opposite plates or sides B of the said frame or box and thus prevent the endless escape-rope from becoming displaced while passing thereover. The endless escape-rope I passes from both sides of the main supporting-pulley H to the outermost wheels or pulleys in opposite sides of the frame or box of the upper opposite pairs of friction wheels or pulleys. The corresponding portions of the endless rope on opposite sides of the central pulley H pass from said outer wheels or pulleys between the same and the inner wheels of the same pair and around said inner pulleys, thence back to the outer pulleys of the next lower pairs, from which the corresponding portions of the rope are then passed up between said outer pulleys and around the inner pulleys of the same pairs in a similar manner to the winding of the upper pairs of pulleys or wheels already described. The corresponding portions of the endless escape-rope are wound in a similar manner around the next succeeding lower pairs of friction wheels or pulleys until the same reach the inner pulleys of the lowermost pairs, from which both portions of the endless rope pass through the bottom opening of the box or frame and to the ground. It will be readily seen that when a person secures himself to one side of the endless rope the friction offered the same by the several pairs of

friction wheels or pulleys is sufficient to sustain the weight of a person and allow him or her to descend to the ground with reasonable rapidity and perfect safety, and that by grasping the opposite ascending side of the endless escape-rope the descent of the person may be regulated and stopped at will.

Secured to the escape-rope I at suitable points thereon, are the body-supporting attachments K. The said body attachments K, which are suitably connected to the endless escape-rope, are provided with the securing-rings L, connected directly with the rope and having the waistbands N secured at one end thereto and adapted to engage the buckle N′, also secured to said rings, so that said bands may be tightly secured around the waist of the person.

Secured to the back and opposite sides of the waistband are the crotch-straps O, provided at one end with the snap-hooks T, which are designed after said straps have been passed between the legs of a person to be connected with the front securing-ring of the attachment, so that the person will be securely connected to the portion of the escape-rope upon which he is descending. After being connected with the rope by means of this attachment a person can readily descend to the ground, as already described. The attachments described are so connected to opposite sides of the endless escape-rope that while one is at the ground the other is directly under the rope frame or box ready for a person to descend, and that while one is descending to the ground the other is ascending to the frame or box ready for the descent of another person.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a fire-escape, a suitably-supported frame or box, opposite pairs of friction wheels or pulleys arranged on opposite sides of said box, and an endless escape-rope passing over said opposite pairs of pulleys or wheels, substantially as set forth.

2. In a fire-escape, a frame or box adapted to be suspended from a building, opposite horizontal pairs of grooved rope wheels or pulleys arranged pair above pair in opposite sides of the said box or frame, and an endless escape-rope passing continuously around each horizontal pair of wheels or pulleys, substantially as set forth.

3. In a fire-escape, a box or frame having a longitudinal central opening, a supporting-bolt passing through the top of said box or frame, a central supporting-pulley suspended from said bolt within said opening at the top of the box or frame, opposite horizontal pairs of rope wheels or pulleys mounted within said box or frame on opposite sides of the central opening therein and arranged pair above pair, and an endless escape-rope passing over the said supporting-pulley and passed continuously around each opposite horizontal pair of wheels or pulleys, substantially as set forth.

4. In a fire-escape, the combination, with a friction-retarded endless escape-rope, of body-supporting attachments secured to said rope and comprising a main front securing-ring, a waistband connected to said ring and adapted to be buckled thereto, and opposite crotch-straps secured to opposite sides and back of the waistband and provided at their ends with snap-hooks designed to engage the front securing-ring, substantially as set forth.

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

ARGULAS A. BADGER.

Witnesses:

WILLIAM S. OWEN,

B. L. HART.