


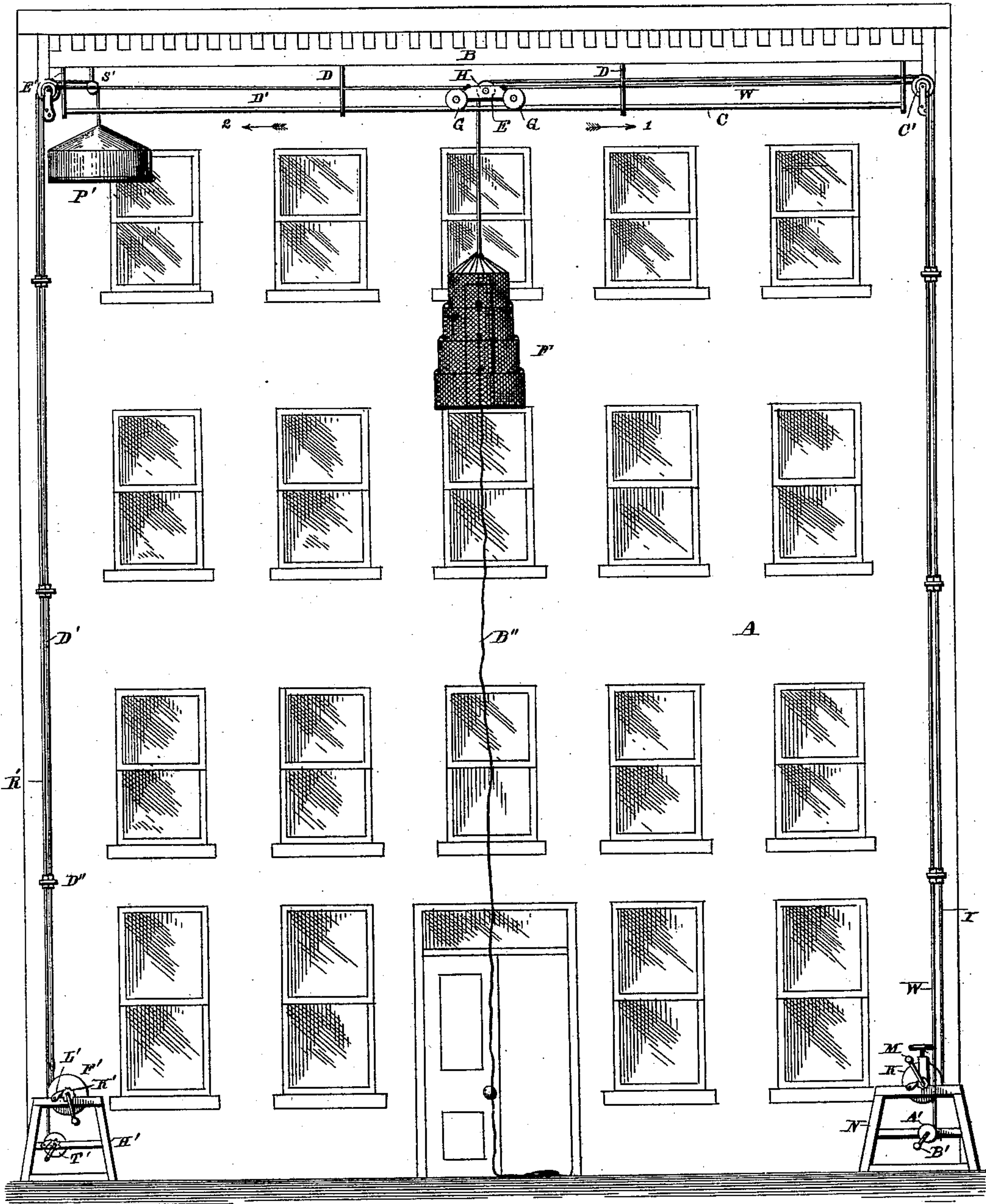
(No Model.)

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A. W. WILCOX & M. A. MERRILL.
FIRE ESCAPE.

No. 359,526.

 Patented Mar. 15, 1887.



WITNESSES

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INVENTORS

A. W. Wilcox
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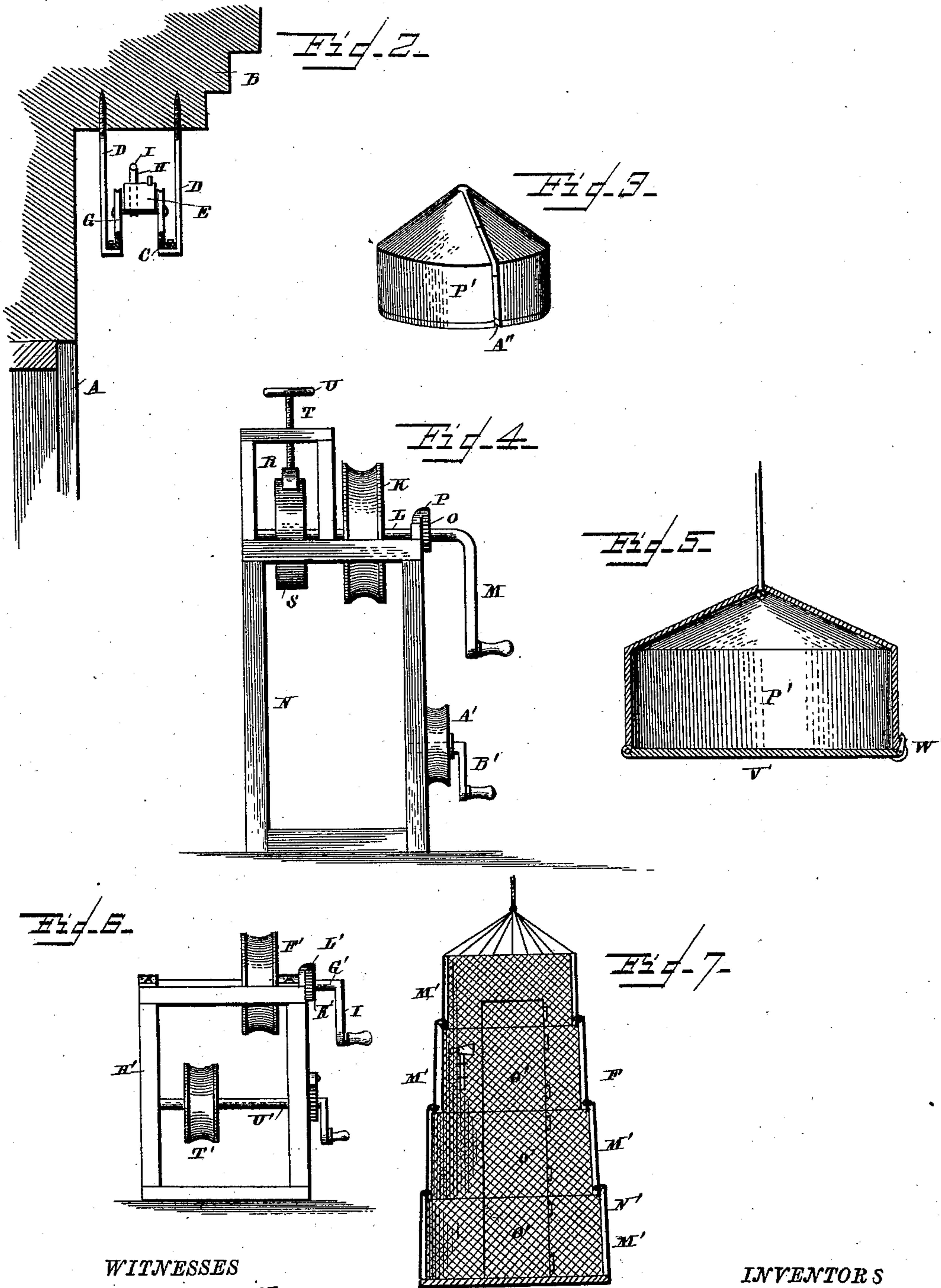
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UNITED STATES PATENT OFFICE.

ALVA W. WILCOX, OF NEWARK, OHIO, AND M. AUGUSTA MERRILL, OF
HENDERSON, NEW YORK.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 359,526, dated March 15, 1887.

Application filed July 31, 1886. Serial No. 209,630. (No model.)

To all whom it may concern:

Be it known that we, ALVA W. WILCOX, of Newark, in the county of Licking and State of Ohio, and M. AUGUSTA MERRILL, of Henderson, in the county of Jefferson and State of New York, citizens of the United States, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification, reference being had therein to the accompanying drawings.

Our invention relates to improvements in fire-escapes, and more particularly to that class in which a cage or basket is caused to travel back and forth on ways near the roof or cornice of the building, said cage being adapted to be raised and lowered so as to rescue persons from any part of the building.

Referring to the drawings, Figure 1 is a side elevation of a building with our improved escape secured thereto. Fig. 2 is a sectional view of the cornice of the building with the track and car thereon. Fig. 3 is a perspective view of the box or casing for holding the cage when not in use. Fig. 4 is an end view of the frame supporting the windlasses which operate the ropes for moving the car and raising or lowering the cage or basket. Fig. 5 is a sectional view of the box or casing for holding the cage or basket. Fig. 6 is an end view of the frame supporting the windlass which operates the ropes for moving the car, and for raising and lowering the casing which contains the basket. Fig. 7 is a side elevation of the cage or basket.

A indicates the front of a building, and B the cornice, under which the track or way C is secured by suitable supports, D.

The track C may be made of bar-iron; but we prefer to make it of wire rope, and provide the car with grooved wheels adapted to move back and forth over said rope.

E is the car or carriage for supporting the cage or basket F, said car being provided with grooved wheels G, adapted to travel on the ways or tracks C, as already indicated. The car E is provided with a central aperture, in which is mounted a grooved friction-wheel, H, over which the wire rope I passes, one end of said wire rope I being secured to the top of the car, while the other end is secured to the drum K, mounted on the shaft L, said shaft

being provided with a winch or crank-arm, M, and mounted in suitable bearings in the frame N. The shaft L is provided with a ratchet-wheel, O, with which the pawl P engages, and by which means the cage or basket can be safely held at any desired window while the persons are getting into the cage, after which the pawl is disengaged and the car permitted to descend.

The descent of the car is regulated by means of the brake R, which is brought into contact or removed from contact with the periphery of the wheel S on the shaft L by means of the screw-rod T and brake-wheel V.

W is a wire rope, one end of which is secured to the car E, while the other end is secured to the drum A', mounted in the frame N, said drum being provided with a crank-arm, B, for operating it. Both of the ropes W and I pass over the pulley-wheels C', secured to the cornice at one end of the track, as shown in Fig. 1, and the office of the rope W is to draw the car in the direction of the arrow 1.

D is a rope, one end of which is secured to the other end of the car, and passes over the pulley-wheel E', while the other end of said rope is secured to the drum T' on the shaft G', mounted in suitable bearings in the frame H', said shaft G' being provided with a crank-arm, I', and ratchet-wheel K', which is adapted to engage with the pawl L'. The office of the rope D' and the drum T', with its operating devices just described, is to draw the car in the direction of the arrows 2.

It will be noticed that by having an operator at each windlass or drum A' and T' the car can be drawn to any desired point on the track, and the cage brought to any desired window.

It is designed to encase the frames N and H', with their operating devices in suitable boxes, said boxes being provided with doors and locks and keys, so that unauthorized persons cannot tamper with the apparatus, and only such as are intrusted with the keys can have access to the operating devices.

The cage F is of peculiar construction, and is by preference made of wire-netting, but may be made of sheet metal or other suitable material. The cages composed of a series of cyl-

inders, M', of different diameters and adapted to slide or telescope one within the other, the sections being joined by the rods N', the rods being bent at their upper ends around the bars in the next section in the form of loops, so they will slide thereon, as shown in Fig. 7.

The several sections of the cage are provided with hinged sections O', which form a door when the cage is distended and ready for use, the door-sections being connected together by bent rods, so that they will not interfere with the closing up of the cage. The rods which connect the door-sections are the same as the rods N', heretofore described. The cage is provided with a suitable bottom, and pockets or receptacles may be placed therein for the reception of a hatchet or other tools which are necessary. When the cage is not in use it is closed by sliding the sections together one within the other, and it is stored or packed in the box or receptacle P' and the box suspended near the cornice of the building, as shown in Fig. 1, by the rope R', said rope being led over the pulleys S and E' and the other end of said rope being connected to the drum T' on the shaft V', which is mounted in the lower portion of the frame H', said shaft V' being controlled by a pawl and ratchet to hold the box P' in its elevated position. The box or casing is provided with a door, F', which is hinged to its lower side, said door being held in a closed position by a suitable latch or hook, W'. The box or casing P' is provided with a slot or opening, A'', which extends from the side to the center, so that the cage F can be brought into the box and its suspending-rope I allowed to pass into the slot A'', thus having the cage always secured to its suspending-rope and constantly ready for any emergency. Suitable automatic devices may be employed for releasing the door of the box P' while it is in its elevated position, which will obviate the necessity of lowering the box except when it is desired to place the cage therein; and when it is desired to bring the cage into use all that is required is to release the door F', when the cage will swing clear of the box, ready to be manipu-

lated by the ropes and drums already described. B'' is a rope secured to the lower portion of the cage, by which the cage can be steadied and held in place by persons on the ground. The operating-ropes I, W, D', and R' are held in position by the guides D'', which are secured to the walls of the building.

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

1. In a fire-escape of the character described, the car E, adapted to be moved back and forth on suitable ways by ropes running in opposite directions, in combination with the rope I, car F, drum K, and brake R, the ropes passing over suitable pulleys located on the front of the building at the sides thereof, as set forth.

2. In a fire-escape, the cage F, composed of cylindrical sections of wire-netting of different diameters, said sections being connected together by the bars N', as described, whereby sections are adapted to telescope or slide into each other, as set forth.

3. In a fire-escape, the cage F, composed of cylindrical sections of different diameters, said sections being provided with hinged sections O' and joined together with a sliding connection, whereby, when the cage is distended for use, a door will be formed on one side, as set forth.

4. In a fire-escape, the box or receptacle P', provided with the slot A'', adapted to receive the rope and cage, in combination with the rope R', drum T', and shaft V', as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

ALVA W. WILCOX.

M. AUGUSTA MERRILL.

Witnesses for Alva W. Wilcox:

GEORGE P. WEBB,

F. ELZA WALSTON.

Witnesses for M. Augusta Merrill:

S. S. SINSABAUGH,

L. W. SINSABAUGH.