(No Model.)

# J. M. KIMBALL & M. E. WEST.

## FIRE ESCAPE.

No. 458,023. Patented Aug. 18, 1891.

Fig. 1.

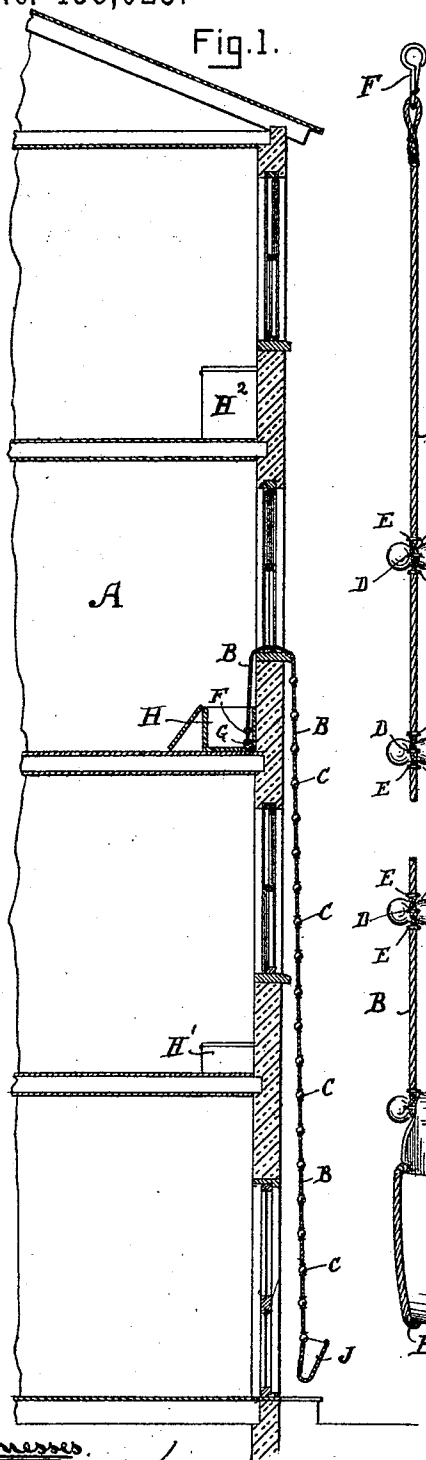



Fig. 2.

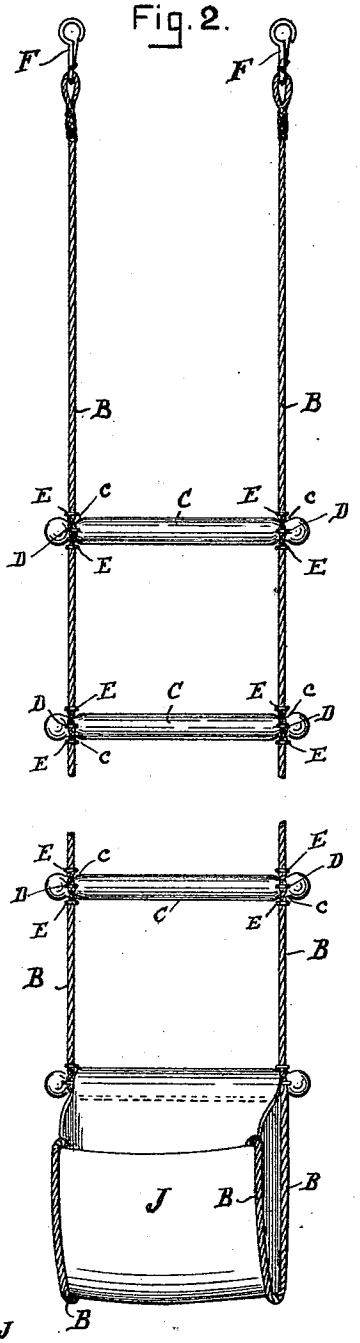



Fig. 3

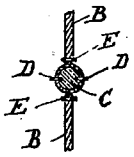
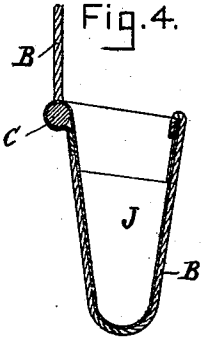



Fig. 4.




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

# UNITED STATES PATENT OFFICE.

JAMES M. KIMBALL AND MARY E. WEST, OF BRADFORD, MASSACHUSETTS; SAID KIMBALL ASSIGNOR TO SAID WEST.

## FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 458,023, dated August 18, 1891.

Application filed March 13, 1891. Serial No. 384,934. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES M. KIMBALL and MARY E. WEST, both citizens of the United States, residing at Bradford, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Fire-Escapes, of which the following, taken in connection with the accompanying drawings, is a specification.

The object of our invention is to produce an apparatus by means of which persons may easily escape from a burning building, and which will always be ready and accessible to the inmates.

The invention consists in a ladder consisting of a series of rounds attached to side ropes in a peculiar manner, the upper end of said side ropes being secured or attached to screw-eyes and the lower end provided with a bag in which a child or valuables may be placed and lowered.

Referring to the accompanying drawings, Figure 1 represents a sectional view of a building fitted with fire-escapes embodying our invention, one of which is shown ready for use. Fig. 2 is a front view of the upper and lower ends of a fire-escape embodying our invention. Fig. 3 is a detail view showing how the rounds are secured to the side ropes. Fig. 4 is a sectional view of the lower round and the bag attached thereto.

A represents a vertical section of a four-story building, each floor above the ground-floor being fitted with our improved fire-escape.

The fire-escape consists of a ladder formed of two side ropes B B, of four strands each, and a series of rounds C, connected thereto. Each round C near its ends is formed with a recess *c*, and the side rope B, at the place where it is desired to secure the rounds, is divided so that two of the strands will pass on one side of the round and the other two strands on the other side. When the ends of the rounds C have been inserted between the strands of the rope, they are secured in place by means of staples D, one on each side of the round, and the rope is prevented from opening or uncoiling by means of metal rings E, placed just above and below each round. Said rings we prefer to make of wire twisted around said side ropes. To the upper end of each of the side ropes is secured a snap-hook F, by means of which they are attached to screw-eyes G, secured to the bottom of the box H, the box being securely fastened to the floor, or, if desired, the eyes may be screwed into the floor. To the lower round of the ladder is secured a bag J, of canvas, the ends of the side ropes B being extended and form the corners of the sides of said bag. We prefer to make the bottom round of metal, so that, its being heavy, will keep the ladder straight when in use. Of course the ladders would have to be made of various lengths, according to the place in which they are to be applied, and the box or case for containing the same would have to be in proportion. Thus the box H′ on the second floor would be the smallest, being just sufficiently large to hold the ladder when folded up, and the box H on the third floor would have to be so much larger to accommodate the extra length of ladder, and the same with the box $H^2$ on the fourth floor. It will be seen that fire-escapes thus constructed are always ready and in place, and all that a person has to do is to open the box, raise the window, and throw the ladder out, when he or she can easily descend, and should the person have a child or valuable property it can be placed in the bag and lowered first, the person following after.

What we claim as our invention is—

1. A fire-escape consisting of side ropes of four strands each, a series of rounds, each recessed near its ends and passed through the ropes, so that two strands are on one side and two on the other, staples for holding the rope to the rounds, rings for preventing the rope from spreading or uncoiling, and hooks for attaching the ends of the ropes to eyes, substantially as set forth.

2. A fire-escape consisting of side ropes B B, of four strands each, rounds C C, secured thereto by staples D, and rings E, a

bag J, secured to the lowest round, snap-hooks F, attached to the upper ends of the ropes B, eyes G for securing said hooks, and a box H, in which the escape is folded when not in use, substantially as set forth.

In testimony whereof we have signed our names to this specification, in the presence of two subscribing witnesses, on this 13th day of February, A. D. 1891.

JAMES M. KIMBALL.
MARY E. WEST.

Witnesses:
WALLACE L. KIMBALL,
MINNIE H. WEST.