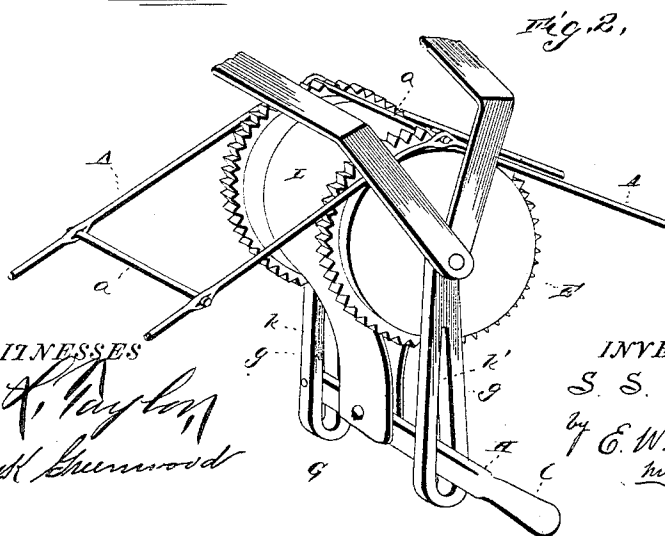
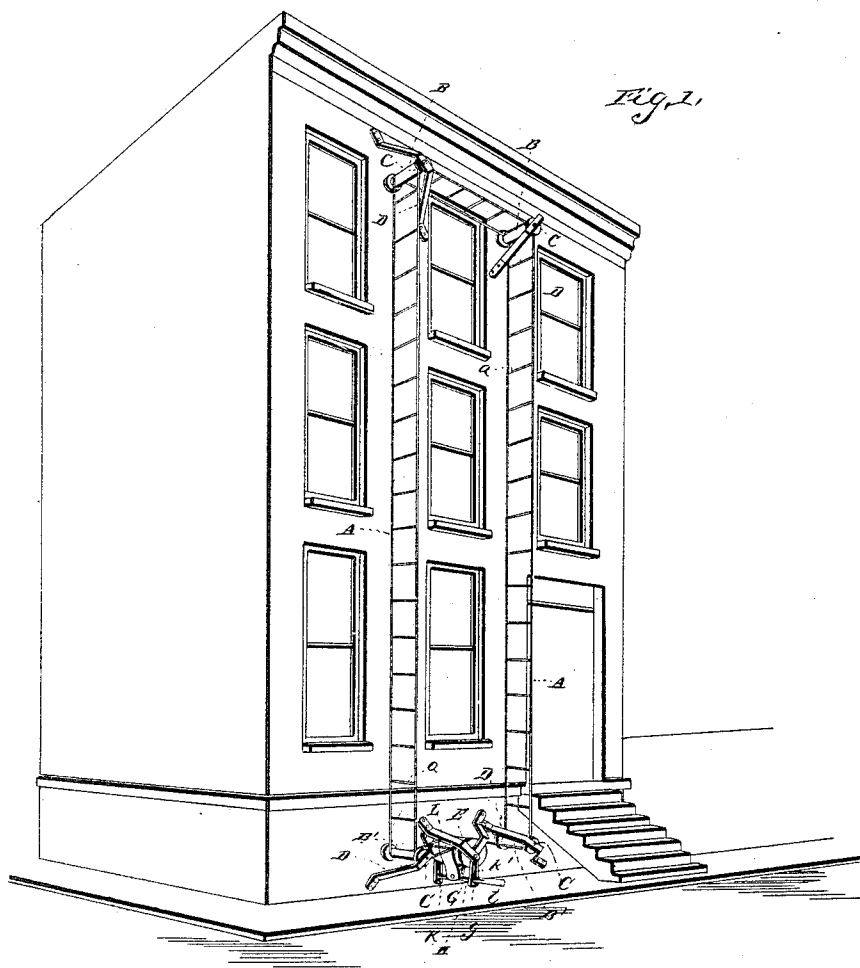


(No Model.)

S. S. ANDREWS.
FIRE ESCAPE.

No. 433,115.

Patented July 29, 1890.



WITNESSES

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UNITED STATES PATENT OFFICE.

SAMUEL S. ANDREWS, OF KNOXVILLE, IOWA.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 433,115, dated July 29, 1890.

Application filed April 14, 1890. Serial No. 347,887. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL S. ANDREWS, a citizen of the United States, and a resident of Knoxville, in the county of Marion and State of Iowa, have invented certain new and useful Improvements in Fire-Escapes; and I do 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of my device in position for use. Fig. 2 is a detail of the brake mechanism.

My invention relates to improvements in fire-escapes.

The object of the invention is to provide a device of the character named which will afford a convenient means of escape from burning buildings, and which will be simple in construction and inexpensive.

With these objects in view the invention consists in certain novel features of construction, which will be hereinafter fully described and specifically claimed, reference being had to the accompanying drawings.

In the drawings, A represents an endless ladder formed of wire cable or of rope, and provided with the rungs *a*, the ends of which are twisted in the cable or rope and firmly secured in position.

B B and B' B' represent four spools or rollers of suitable size and material, the spools B B being shown as located on the wall of the building near the cornice, while the spools B' B' are represented as located near the ground, said spools being mounted on suitable metal rods C, which are firmly secured in the building, the outer end of each being held in position by means of braces D, said rods being provided with movable collars for adjusting the spools.

E represents a wheel or drum corresponding in length to the width of the ladder, and provided at either end with an annular cog or sprocket wheel, the teeth or sprockets of which are adapted to engage the rungs of the ladder. This wheel or drum is loosely mounted on a metal rod, which is secured to the building and firmly braced, the point at which it is located being near the ground and between the two spools B' B'.

G represents a brake mechanism for regu-

lating the movement of the drum, consisting of the arms *g*, secured to each end of the drum and provided with the slots *k k'*.

H is a rod which is pivoted in the slot *k*, its opposite end having a free movement in the slot *k'*, and is provided with a handle *l*. Secured at or near the center of this rod H is a band or loop L, which passes around the center of the drum. The friction of this band upon the drum will prevent its too rapid movement.

The endless ladder is adapted to pass around the spools B B and B' B' and over the drum E, the cogs or sprockets on each end of said drum engaging the rungs of said ladder. As shown in the drawings, the ladder and spools are so arranged that the ladder is easily accessible from three tiers of windows. The person escaping steps from the window upon the ladder, his weight carrying him to the ground, the speed of the descent being checked by means of the drum and brake mechanism, the ladder at all times being in a position for immediate use.

Having thus fully described my invention, what I claim as new therein, and that for which I desire to secure Letters Patent, is—

1. The herein-described fire-escape, consisting, essentially, of an upper and a lower set of horizontally-projecting rollers or spools, an endless ladder passing over said spools, and means for regulating the movement of the ladder, substantially as described.

2. The herein-described fire-escape, consisting, essentially, of an upper and a lower set of horizontally-projecting rollers or spools, a drum, and an endless ladder passing over said spools and drum, and means for regulating the movement of the ladder, substantially as described.

3. The herein-described fire-escape, consisting, essentially, of an upper and a lower set of rollers or spools projecting horizontally from the building-wall, a drum provided with sprockets or cogs, a friction-brake connected to said drum, and an endless ladder passing over said spools and drum, substantially as described.

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

SAMUEL S. ANDREWS.

Witnesses:

C. M. BURNETT,
FRANK CLOE.