

(No Model.)

J. F. COOK.
Flexible Ladder.

No. 237,253.

Patented Feb. 1, 1881.

FIG. I.

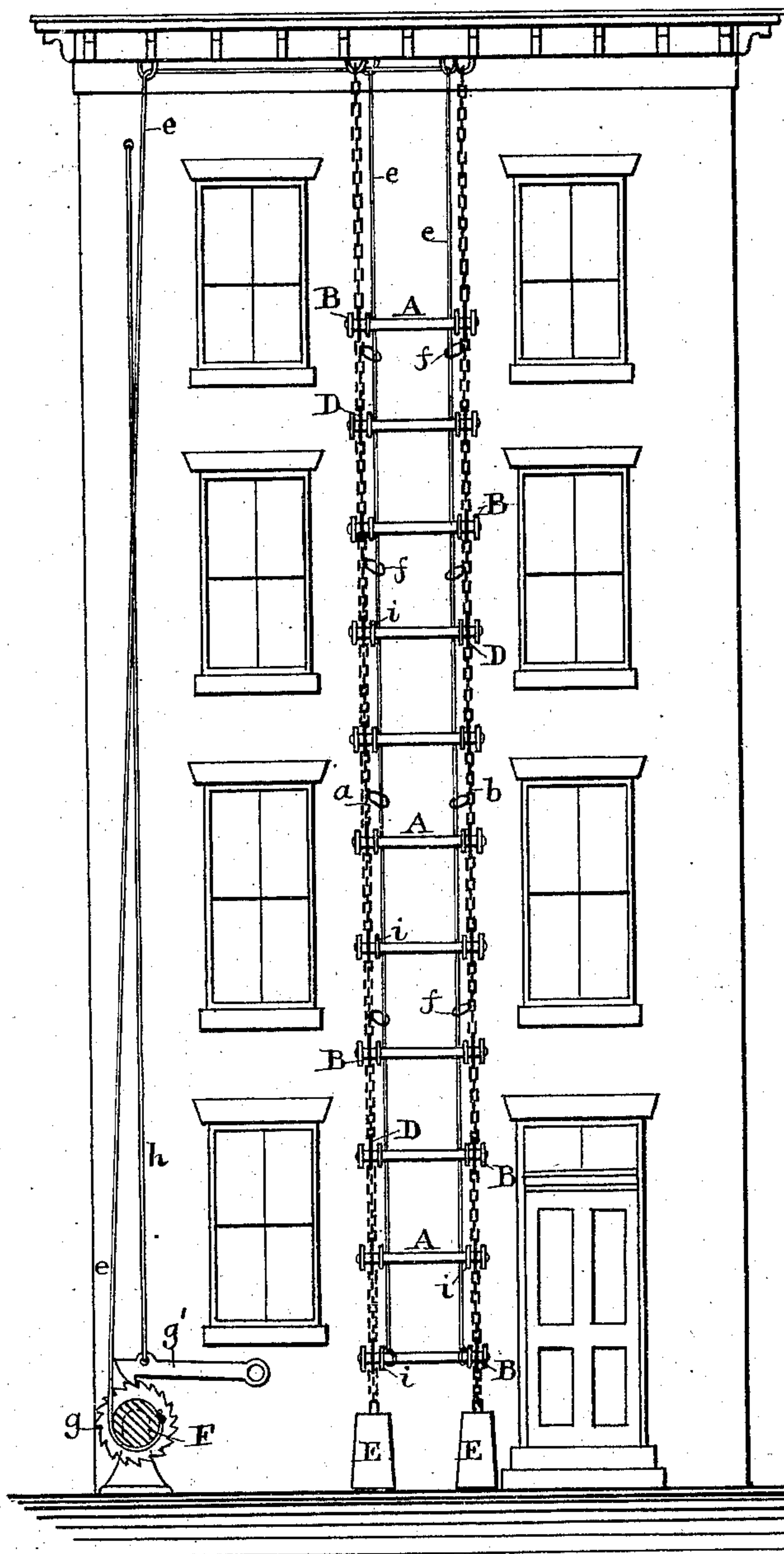


FIG. II.

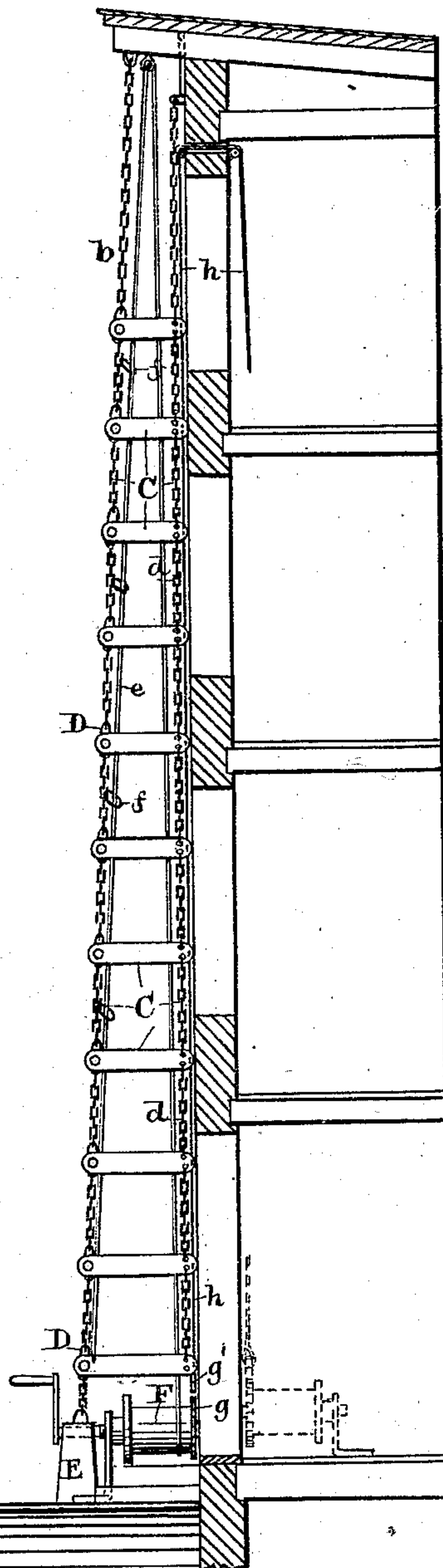
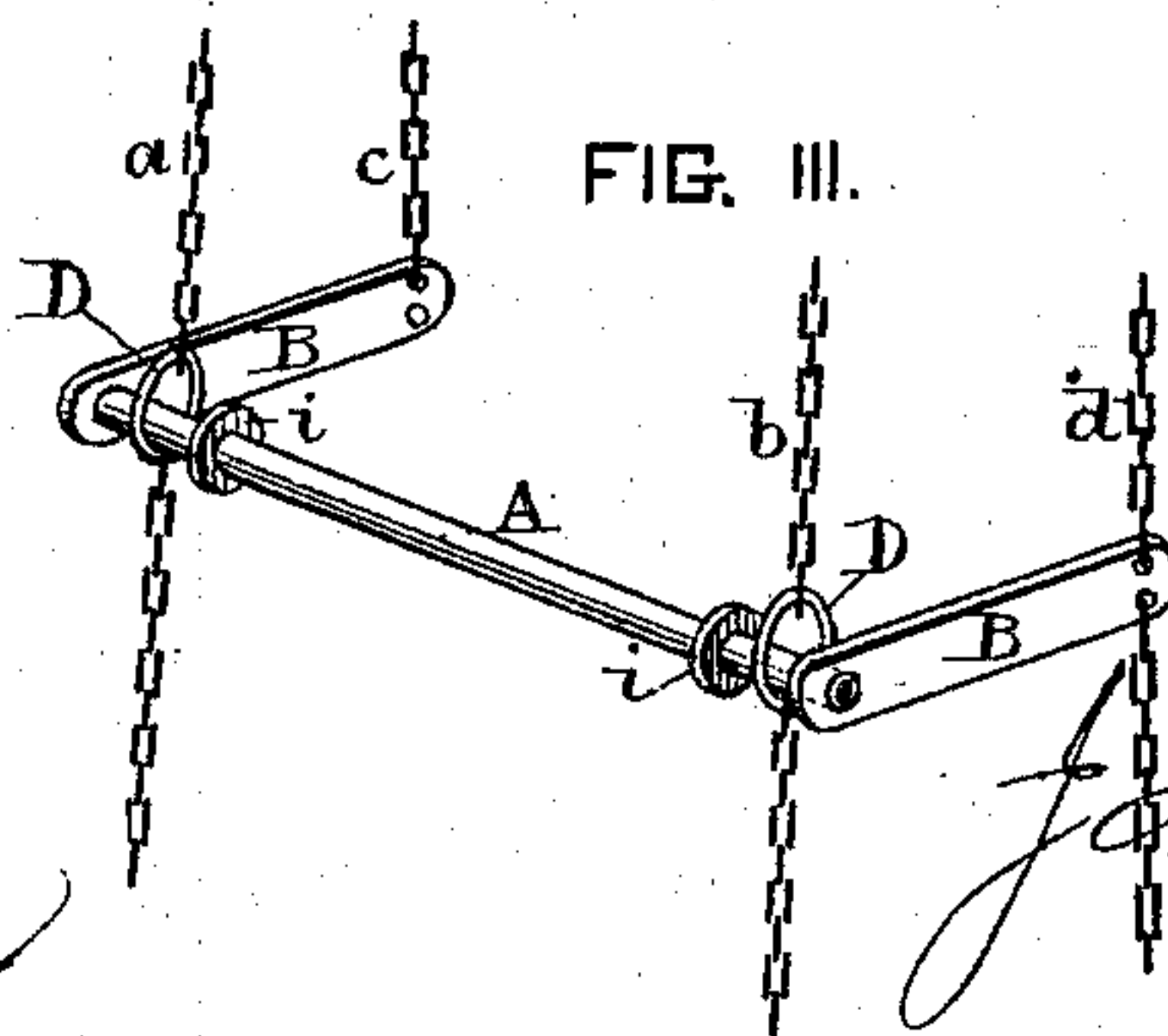


FIG. III.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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FLEXIBLE LADDER.

SPECIFICATION forming part of Letters Patent No. 237,253, dated February 1, 1881.

Application filed July 26, 1880. (No model.)

To all whom it may concern:

Be it known that I, JACOB F. COOK, a citizen of the United States, residing at Baltimore city, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Fire-Escapes; and I do hereby 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 or figures of reference marked thereon, which form a part of this specification.

My invention relates to fire escapes or ladders in which a front and two side ladders are formed; and the object of my invention is to afford ready escape from buildings of every character and description in case of fire. I arrange an inclination of the ladder by braces, commencing at the top of the escape and increasing in length on each step of the escape, thus forming two side ladders in connection with the escape, and giving any desired inclination. These braces fold behind the escape when not in use, and unfold or take their proper position as braces when in use.

In the accompanying drawings, Figure I is a front elevation of my fire-escape attached to a building. Fig. II is a side view of the same. Fig. III is an enlarged detail view.

The escape is held in position by proper fastenings attached to the building front or roof, where it is suspended, when desired, in a neat, workmanlike, and ornamental manner. It may be constructed in the most simple and inexpensive manner. The rounds or steps A are made, preferably, of gas pipe and fittings. The braces B and side ladders, C, may also be of gas pipe and fittings. These steps A and braces B are to rest in and work in rings D in the chains *a b*, thus overcoming friction or any liability to rust or stick. When in position for ascent or descent the rounds and braces rest on four chains, *a b c d*, two of these chains, *a b*, acting as an outer support for the rounds or steps A, and the other two, *c d*, acting as a guide and inner support for the braces B, and these thus form side ladders, C. A wire rope or ropes, *e*, work through additional rings *f* attached to the

chains *a b*, and by it the escape is folded and unfolded, or raised and lowered.

The reel or hoisting apparatus F can be placed on the inside or outside of the building, in the cellar or on the highest floor. The reel F holds the escape in position, when hoisted, by a ratchet, *g*, and pawl *g'*, which can be detached by a wire or rope, *h*, having connected thereto a knob or other contrivance suitable for the purpose, from the pavement on the outside, or any room or floor of the inside, by merely pulling the wire or rope *h*, thus releasing the escape, which then descends automatically by its own weight. When pulling the wire or rope *h* to release the escape, an alarm can be sounded at the same time for the building or for the fire department, where telegraphic communication can be had. It will be evident that a platform or wire basket can be attached to the bottom of this escape, to be used for schools or institutions for aged and infirm persons, and it can be so constructed as to afford rapid means of escape from theaters or other crowded buildings in case of fire or panic. It is also apparent that this escape will afford firemen rapid means of communication with the fire.

An important feature of my invention is that the braces B are gradually lengthened from the upper to the lower ones, so that the outer rounds or steps are arranged in an inclined manner, similar to a ladder, and thus making the descent and ascent much easier than if perfectly vertical.

Another very important feature is the suspension or supporting the rounds in open rings, so that they cannot possibly stick or rust, and thus prevent the easy working of their journals or supports in open bearings instead of close-fitting supports or bearings. The rounds are provided with collars *i*, to keep the rings D at their outer ends, and riveted or screwed into the braces B at their extreme ends.

Weights E may be attached to chains *a b* if they are not heavy enough to descend of their own weight.

If the hoisting apparatus is arranged on the outside of the building, a casing can be placed over it and locked.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. In a fire-escape, the combination of the chains *a b c d*, rounds or steps A, braces B, 5 and side ladders C, with the rings D and *f*, the wire rope *e*, and the hoisting apparatus F, all constructed and arranged substantially as shown, and for the purpose set forth.

2. In a fire-escape, the open rings D, ar- 10 ranged at suitable distances upon chains *a b*,

for supporting the ends of the rounds or steps A, the latter being provided with collars *i* and fastened in braces B, substantially as shown and specified.

In testimony whereof I affix my signature 15 in presence of two witnesses.

JACOB F. COOK.

Witnesses:

JOHN HERZOG,

JOHN G. SCHNEIDER.