

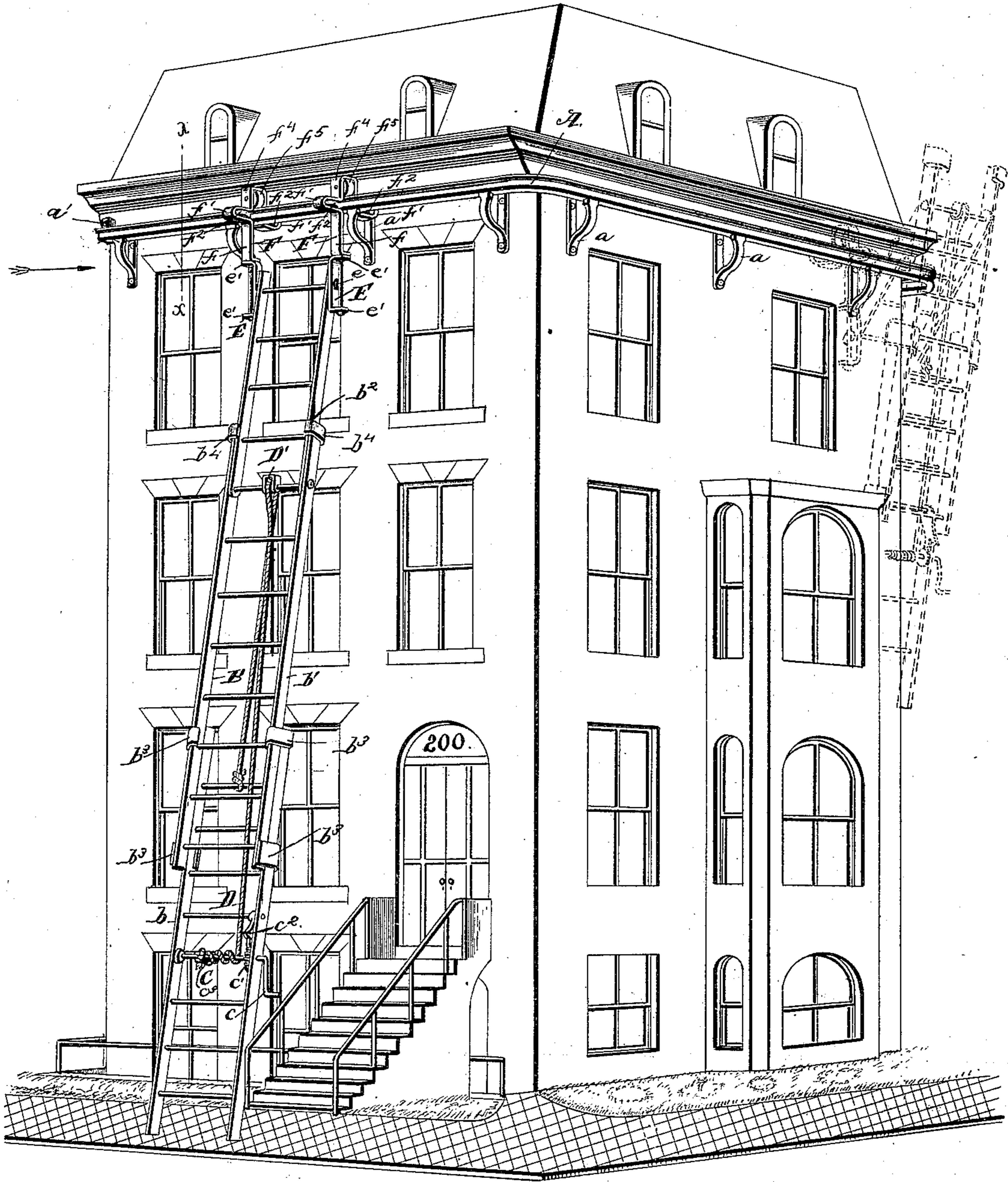
(No Model.)

2 Sheets—Sheet 1.

L. H. LA ROY.
FIRE ESCAPE.

No. 369,647.

Patented Sept. 6, 1887.



Witnesses

Geo. Thayer
Chas. H. H. H.

Fig. 1.

Inventor

Lester H. La Roy

By his Attorneys

C. A. Snow & Co

(No Model.)

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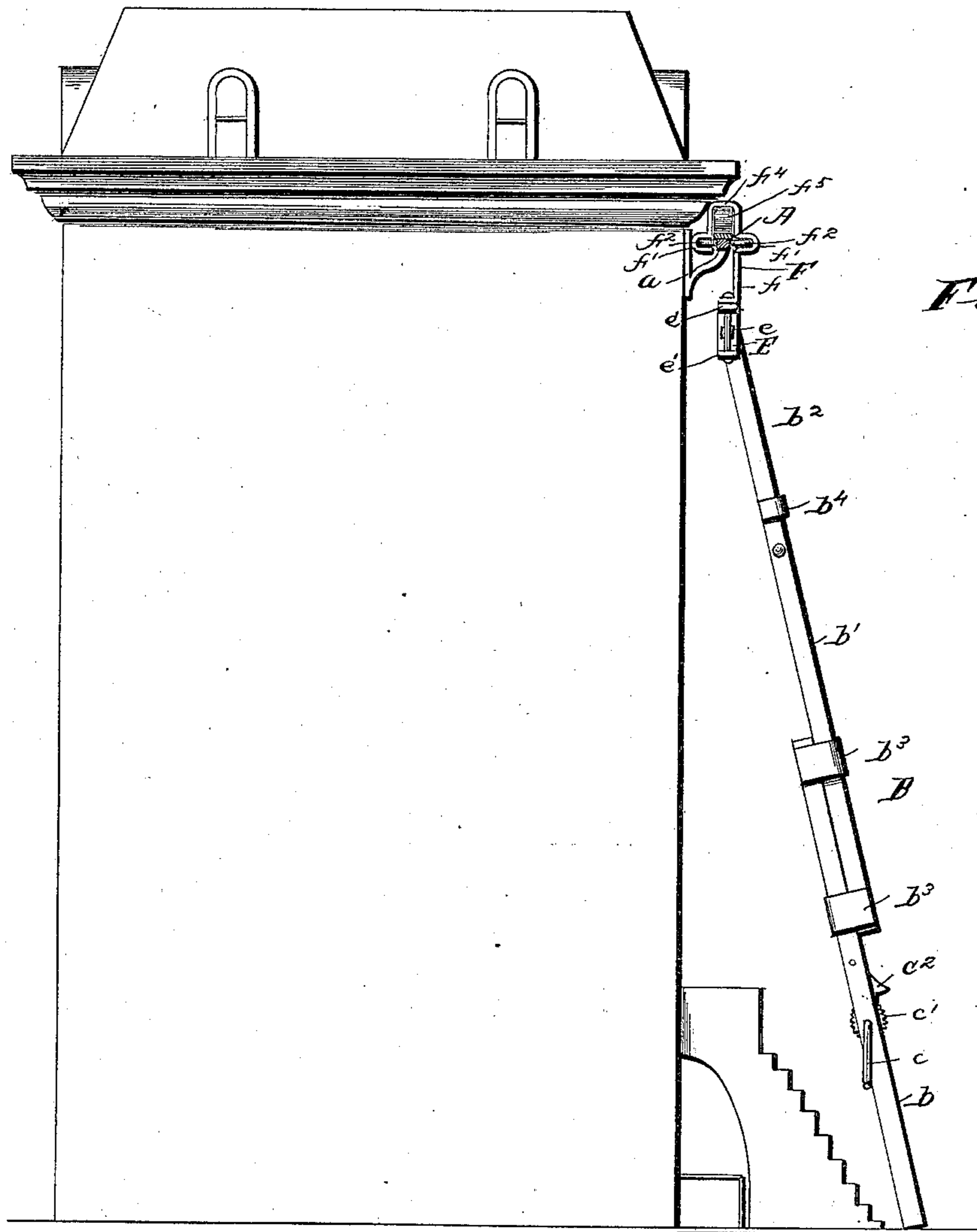
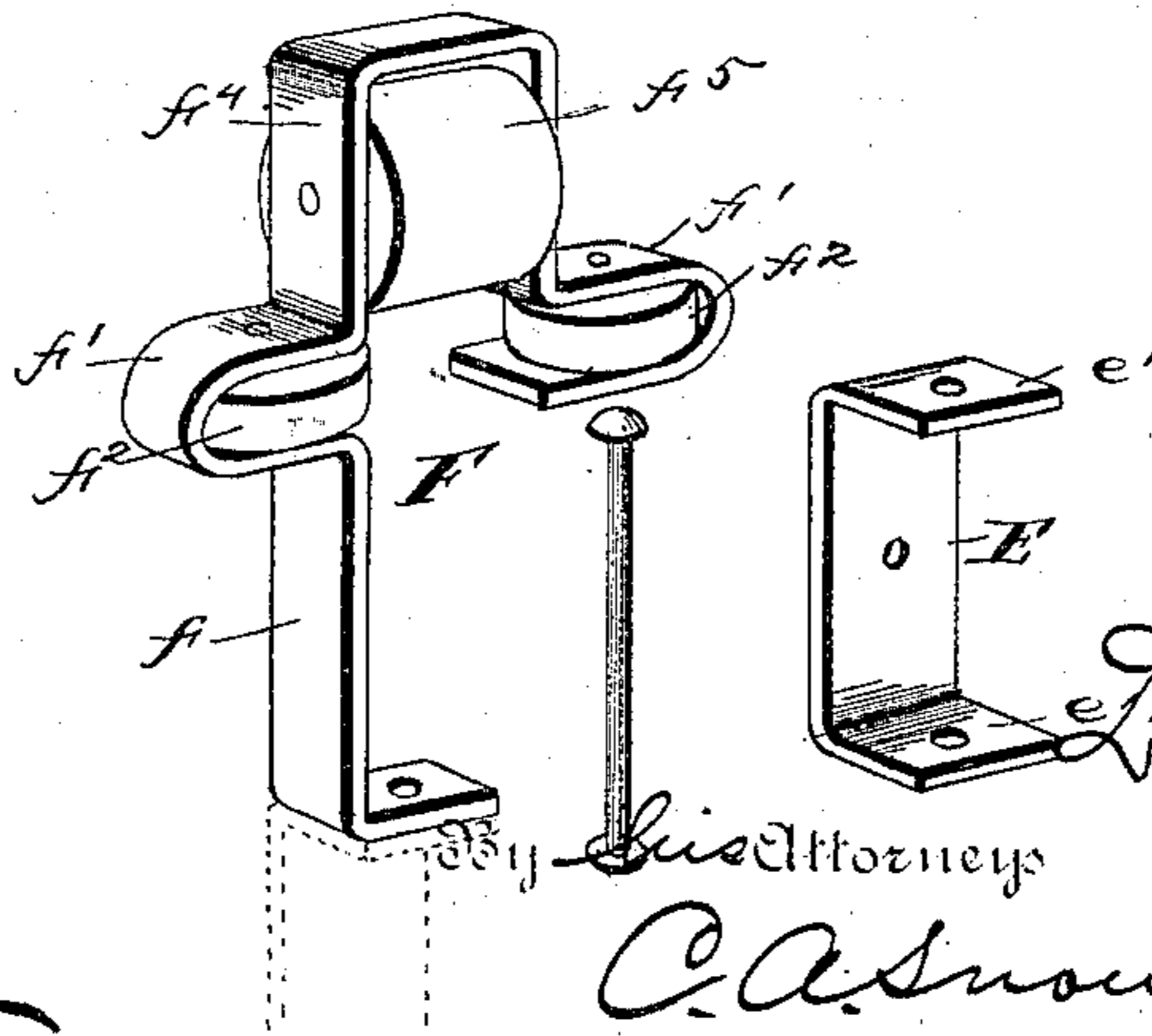


Fig. 3.



Witnesses

Geo. Thayer
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Inventor

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UNITED STATES PATENT OFFICE.

LESTER HIBBARD LA ROY, OF RANDOLPH, NEW YORK, ASSIGNOR OF TWO-THIRDS TO GEORGE WATKINS AND LEVI B. LAROEY, BOTH OF SAME PLACE.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 369,647, dated September 6, 1887.

Application filed June 4, 1887. Serial No. 240,308. (No model.)

To all whom it may concern:

Be it known that I, LESTER HIBBARD LA ROY, a citizen of the United States, residing at Randolph, in the county of Cattaraugus and State of New York, have invented a new and useful Improvement in Fire-Escapes, of which the following is a specification.

My invention relates to an improvement in fire-escapes; and it consists in the construction and arrangement of the parts of the same, which will be more fully set forth hereinafter, and pointed out in the claims.

The object of my invention is to provide a novel form of fire-escape constructed of telescoping ladders adapted to be operated upon a track or way secured to the upper portion of a building. I attain this object by the device illustrated in the accompanying drawings, wherein like letters of reference indicate similar parts in the several views, and in which—

Figure 1 is a perspective view of a building with my improved fire-escape shown in connection therewith. Fig. 2 is a section on the line *xx* of Fig. 1 of the track or way, showing the ladder in connection therewith in side elevation. Fig. 3 is a detailed perspective view of one of the hanger-blocks and its swivel-plate, which is secured to the upper portion of the ladder.

A indicates a track or way, which is secured to the upper portion of a building by means of brackets *a*, upon which the said track or way is secured in a horizontal plane. The said track or way A may be formed straight or with a curve, as shown in the drawings, in turning the corner of a building, and is preferably constructed in the form of a T-shaped rail, in each end of which suitable stops, *a'*, are mounted for the purpose of preventing the hangers of the ladder to which they are attached from passing over the ends of the track or way A.

As shown in the drawings, the ladder B is constructed in three sections, *b*, *b'*, and *b''*. The sections *b* and *b'* have metallic clasps *b''* passing over their ends and partially embracing the edges of the said ladders. The upper end of the ladder *b'* is provided with metallic angle-guards *b''*, which are adapted to engage with the lower sides or ends of the ladder *b''* and re-

tain the said ladders *b'* and *b''* in a rigid continuous connection. In the lower portion of the ladder *b* a windlass, C, is secured and pivotally mounted between and in the sides of the said ladder. This windlass C is provided with an operating handle or winch, *c*, and upon one side thereof, adjacent to one side of the said ladder, a ratchet-wheel, *c'*, is formed, which is adapted to be engaged by a double pawl, *c''*, suitably mounted in proximity thereto. This pawl *c''* is constructed of such configuration as to be adapted to engage with either side of the ratchet-wheels *c'* whenever it is found desirable. To the central portion of the windlass C an eye, *c'''*, is secured, to which one end of a rope or cable, D, is attached, the said rope or cable D passing up over a sheave or pulley, D', mounted in the central portion of the top of the ladder *b'*. The said rope or cable thence passes down behind the ladder *b'*, and is secured to the top rung or round of the lower ladder, *b*. By turning the windlass C the ladders *b* and *b'* will be caused to telescope, and thereby shortened, as will be readily understood.

The round of the ladder upon which the sheave or pulley D' is mounted forms the hinge rod or pintle for the two ladders *b'* and *b''*, and when the ladders *b* and *b'* have been telescoped, as heretofore set forth, the said series of ladders may be further folded through the medium of the hinge-connection between the ladders *b'* and *b''*, as shown in dotted lines in Fig. 1. By this means the said ladders entire may be arranged in a small space when not in use, and placed to one side of the building in an accessible position to some open portion thereof.

To the upper end of the ladder *b''* two swivel-plates, E E, are secured by means of the top round of said ladder projecting outwardly on each side thereof, and secured in the said plates by means of nuts *e*, thereby providing the hinge-connection for the upper section, *b''*, of the ladder. The plates E have angular projections *e'* formed with each end thereof, and on the upper projection of each plate the lower portion of the hanger-block F engages, and are secured to the said plates by means of bolts passing through the projections *e'* and secured to the lower depending portion of the said block. The hanger-blocks F are provided

with the depending projections f , which are secured to the top portions of the plate E, and with two angular projections, f' , in which suitable small friction-rolls, f^2 , are mounted and engage with the side portion of each side of the track or way A. The said hanger-blocks are also provided with a vertical extension, f^4 , in which the enlarged rollers f^5 are mounted, which travel on the top surface of the said track or way A. By this construction it will be seen that an easy traveling motion is provided for the ladder, preventing friction at any point and a consequent stiffness and refusal of the said hangers to operate.

My improved fire-escape is readily mounted in connection with any form of building, is simple in its construction and operation, and cheaply manufactured. With these advantages in view my improvement is rendered useful in connection with small buildings or houses, and especially useful for large buildings—such as hotels, theaters, &c.—the extensible telescoping ladders being so constructed as to adapt them for use in connection with either form of building.

The novelty and utility of my improved device being obviously apparent, it is unnecessary to further enlarge upon the same herein.

It is obvious that many minor changes in the construction and arrangement of the several parts may be made and substituted for those herein shown and described without in the least departing from the nature and principle of my invention.

Having thus described my invention, I claim—

1. In a fire-escape, the combination of the track or way supported upon suitable brackets secured to the sides of the building, the hangers F, having the rollers f^2 and f^5 arranged therein, as set forth, and the telescoping ladders arranged in connection with the lower portion of the said hangers, substantially as described.

2. In a fire-escape, the combination of the telescoping sections b b' , the windlass C, mounted in the lower portion of the section b , the sheave or pulley D', mounted in the upper portion of the ladder b' , and the hoist-rope D, secured to the windlass C, and thence passing up over the pulley D' and down behind the ladder b' to the ladder b , where it is secured, substantially as specified.

3. In a fire-escape, the combination of the sectional ladders, the sections b and b' of which are telescopic and the section b^2 hinged to the upper portion of the section b' , and the hangers F F, secured to the upper portion of the section b^2 , substantially as described.

4. The combination, with the upper section, b^2 , of the plates E E and the hangers F F, having the rollers f^2 , engaging with the sides of the track A, and the roller f^5 , engaging with the top portion of the said track, substantially as described.

5. In a fire-escape, the combination, with the T-shaped track or way A, supported by the brackets a , of the hangers F F, having the two rollers f^2 , engaging with the sides of the said track or way, and the roller f^5 , engaging with the top surface of said track or way, and the extensible ladders, united as set forth, secured to the lower portions of the said hangers F, substantially as described.

6. The combination, with the sections b and b' of the ladder B, of the windlass C, having the eyes secured to its central portion, the ratchet-wheel c' , the double-acting pawl c^2 , the sheave or pulley D', connected to the upper portion of the ladder b' , and the hoist-rope D, secured at one end to the eye of the windlass C and passing up on the rear side of the section of ladder b' , through the sheave or pulley D', and thence down to the top portion of the ladder b , substantially as described.

7. In a fire-escape, the combination of the sections b and b' , the plates b^3 , uniting the two ends of the said sections, the plates b^4 , secured to the top portion of the section b' , the section b^2 , hinged to the section b' and adapted to bear against the plates b^4 to prevent an inward sagging of the ladder, and the hangers F, secured to the upper portion of the ladder b^2 , substantially as described.

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

LESTER HIBBARD ^{his} + LA ROY.
mark.

Witnesses:

GEORGE W. WATKINS,
LEVI B. LA ROY.