

(No Model.)

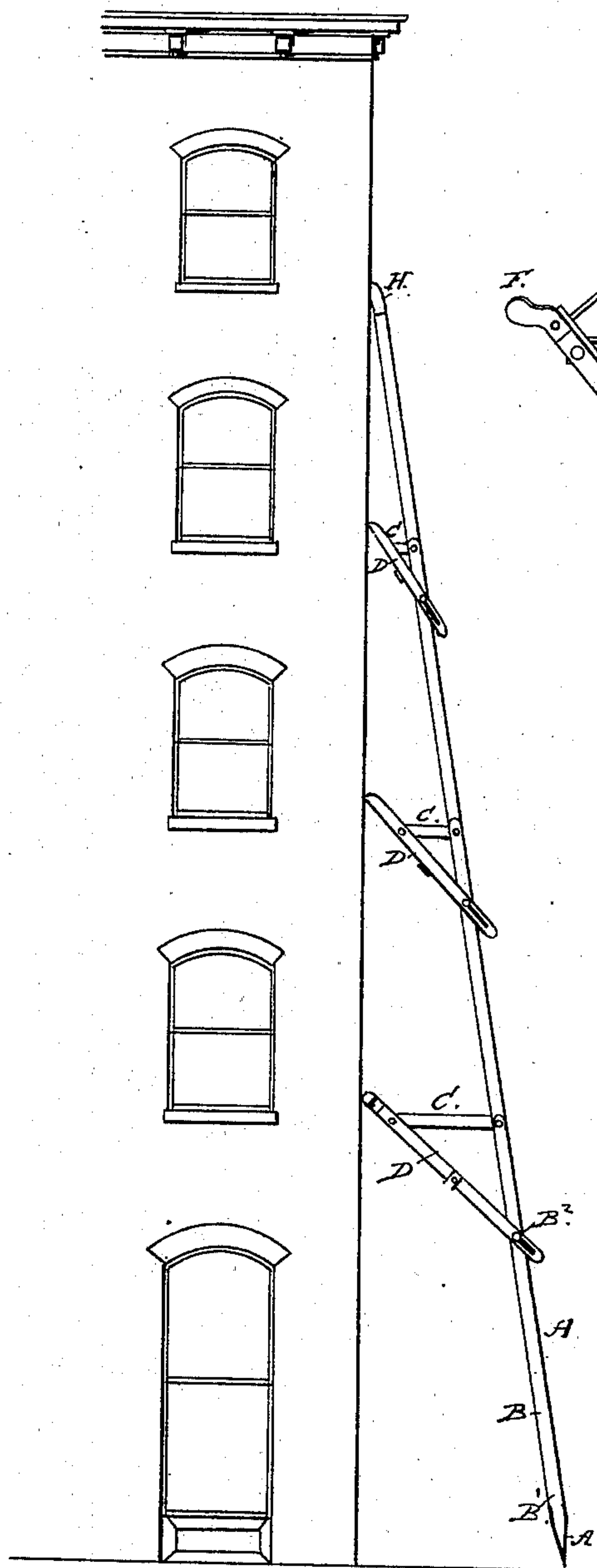
2 Sheets—Sheet 1.

A. & A. ISKE.  
FIRE LADDER.

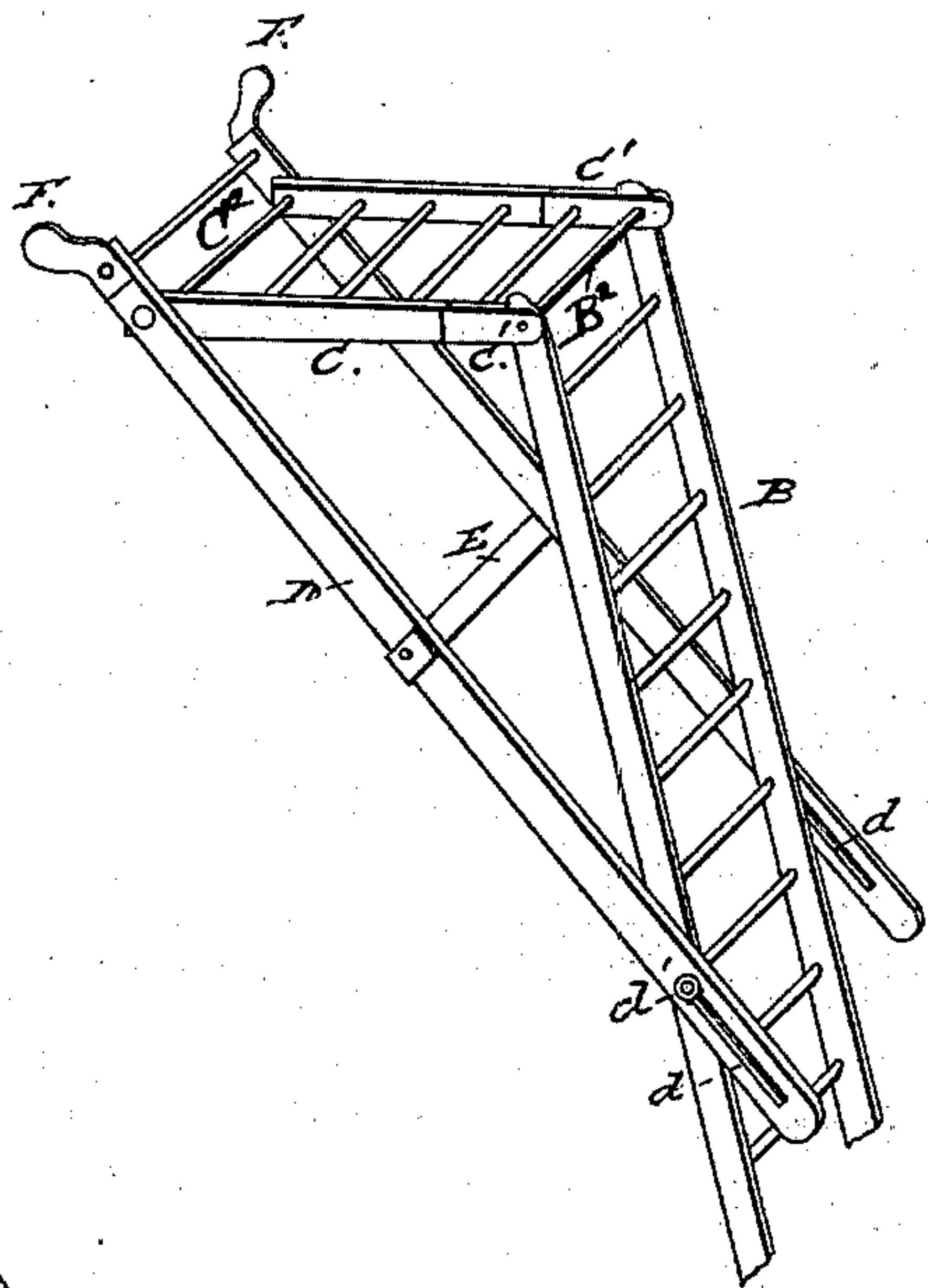
No. 272,054.

Patented Feb. 13, 1883.

*Fig. 1.*



*Fig. 5.*



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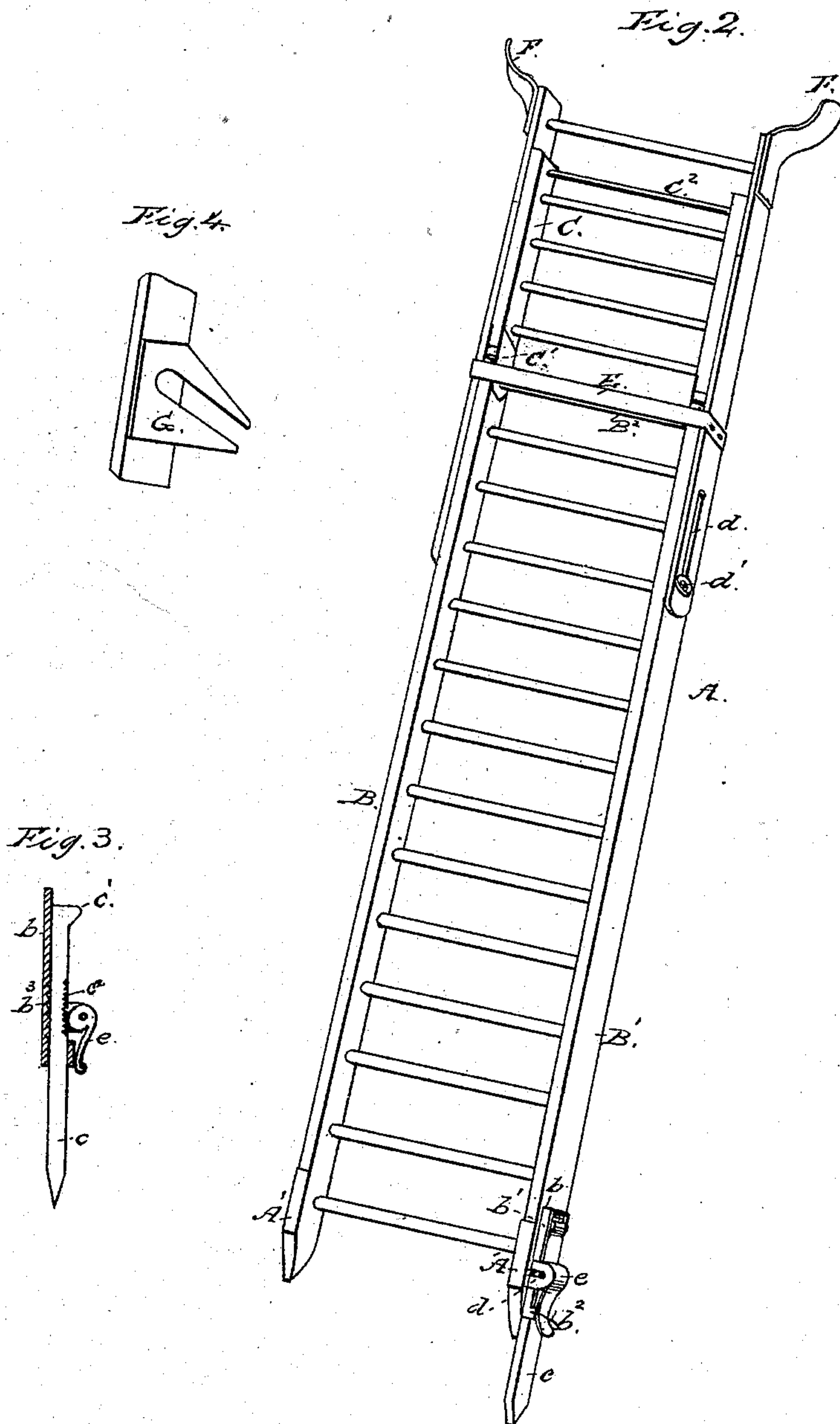
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# UNITED STATES PATENT OFFICE.

ANTHONY ISKE AND ALBERT ISKE, OF LANCASTER, PA., ASSIGNORS OF  
ONE-THIRD TO ROBERT M. SLAYMAKER, OF SAME PLACE.

## FIRE-LADDER.

SPECIFICATION forming part of Letters Patent No. 272,054, dated February 13, 1883.

Application filed May 10, 1882. (No model.)

*To all whom it may concern:*

Be it known that we, ANTHONY ISKE and ALBERT ISKE, citizens of the United States, residing at Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Ladders; and we 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.

This invention relates to ladders which are adapted to be extended and used especially as a means of escape from buildings on fire; and it consists in the construction and combination of parts for effecting such results, substantially as hereinafter particularly set forth.

In the accompanying drawings, Figure 1 represents a side view of our apparatus as applied to a five-story house. Fig. 2 represents a perspective view of the lower ladder detached and folded up. Fig. 3 represents a detail view of the device for adjusting the ladder to the irregularities of the ground. Fig. 4 represents a detail view of one of the hooks for attaching the ladders together; and Fig. 5 represents a perspective view of a portion of the lower ladder detached and unfolded.

The same letters designate like parts in all the figures of the drawings.

A in the above-named drawings designates the lower or first ladder, which is composed of three parts, B C D. The lower end of lower part, B, is pointed to receive a metallic clasp, A', which is similarly pointed to project into and bear against the ground. This clasp is attached to each side of the ladder, and is secured thereto by any suitable means. At the lower end, on the side B' of the lower part, B, or on both sides thereof, and fitting into a recess therein, is a plate, b, having a wall or guard, b', formed on its side edges, to prevent the sliding pin c from moving sidewise, and a cross-piece, b<sup>2</sup>, formed at its outer end, which prevents the pin from moving horizontally and guides said pin in a vertical direction parallel with the ladder. At the middle of said plate b we attach thereto, or drive into the sides B' of

the ladder, staples d, one on each side of said plate b, in the slots d' of which the ends of an eccentric lever, e, turn.

The operation of this device will be readily seen. Suppose the house at which the fire has occurred to be situated along a hill. Of course if a ladder is brought against the house one side of the ladder will be found to be too short. In order to provide for such an emergency, we introduce the means before mentioned for lengthening either one of the sides of the ladder, so as to be adjustable to the irregularities of the ground. The device which we have shown operates so that the sliding pin c can be adjusted up and down by means of the eccentric e, which is turned downwardly and binds the pin at any point desired. The sliding pin or bolt has transverse ridges or serrations c' on its outer face. The face of the plate b has similar ridges or serrations, b<sup>3</sup>. These aid in holding the bolt when the eccentric binds against it. The pin or bolt is also pointed at its lower end, and has a flange, c', at its upper end, which prevents the pin from sliding down too far.

The part C of ladder A is connected to the part B thereof by means of plates or braces C', which are secured to the part C by screws or rivets, and to the part B by the rod B<sup>2</sup>, which forms a pivot for the said parts, and serves also to support the ladder above it. A space is left between the ends of said parts, at the junction thereof, to allow free movement of the part B through the plates. These plates or braces C' fit into recesses in the sides of said parts and form a strong brace for the junction thereof, as they are attached on each side. The upper end of part C has a pivot-rod, C<sup>2</sup>, passing across it and into the part D, which is connected thereto. Each side of part D has a longitudinal slot, d, parallel with the sides, through which slots extend studs d', erected on the sides B' of part B, said studs and slots allowing the part D to be shifted longitudinally. At the middle of said part D is a brace-bar, E, connected to the sides thereof and passing across and underneath the same. This bar braces the sides of part D and prevents them from sagging either way, and it also serves as a supplemental brace for the upper part of the ladder when folded, as shown in Fig. 2. At the upper ends and to the sides of part D we at-



tach, by rivets or bolts, arms F, flaring outwardly, and arranged to embrace the sides of a window-sill and support the upper part of the ladder.

5 The construction of the remaining ladders (except the last) does not vary essentially from the first ladder, except that a modification of the manner of connecting the lower part, B, to the part C is introduced—that is, the braces  
10 or plates C', which are attached in the first ladder to the upper part, C, and connected to the lower part, B, by the pivot-rod, are attached in the remaining ladders (except the top one, which does not require any) to the  
15 lower part and connected to the upper part by the pivot-rod. This construction, however, is immaterial, as either will answer the purposes.

At the bottom end of each ladder, except the first, and to the inner sides thereof, is secured by bolts or rivets a downwardly-projecting jaw, G, having an inclined passage through the same, which is adapted to embrace the sides of the pivot-rod B<sup>2</sup> and hold the ladder firmly in an inclined position.

25 At the upper end of the top ladder, hooks H are secured thereto at its sides. These hooks serve to catch onto any convenient projection of the house—such as a window-sill—and form a support for the top ladder. This ladder is  
30 also provided in the same manner with the jaws for connecting it with the preceding ladder. Each of the ladders may also be provided with the arms (similar to those attached to the first ladder) for embracing the sides of a  
35 window-sill and keeping the ladder firm.

To adjust our extension-ladder against a house we first place the lower ladder in position, bending the parts thereof, so that one part forms the ladder proper, one forms a platform  
40 on which a person can stand, and the other part forms the brace against the house. We then put the succeeding ladders on by passing the jaws thereof over the pivot-rod, bending

the parts of the ladder in the same manner, the last one having its hooks embracing the  
45 window-sill.

When the lower ladder is used separately it will not be necessary to bend the parts thereof. It will form a very strong ladder, as the ladder proper—the parts B and C—has the  
50 part D to brace the sides thereof.

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

1. In a ladder or ladder-section, the main  
55 part B, in combination with the part C, hinged to the upper end of said main part and adapted to be bent to form a platform, and the part D, which has pivotal connection with both of said parts B and C, and is adapted to rest  
60 against the walls of a building.

2. In combination with main part B of the ladder, the hinged part C, and the part D, which supports and braces it, said parts B and D having a stud-and-slot connection, substan-  
65 tially as set forth.

3. In combination with main part B and hinged extension C, the bracing part D, which overlaps the joints of said parts B and C when they are folded, and is provided with a cross  
70 bar or brace, E, substantially as set forth.

4. In combination with a ladder and a guide-plate attached to one side of the bottom thereof, a bar or pin which can be moved up or down in said plate, and a journaled binding  
75 cam or eccentric for locking said bar by turning down said eccentric in the desired position, as set forth.

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

ANTHONY ISKE.  
ALBERT ISKE.

Witnesses:

P. DONNELLY,  
CHARLES C. DONNELLY.