

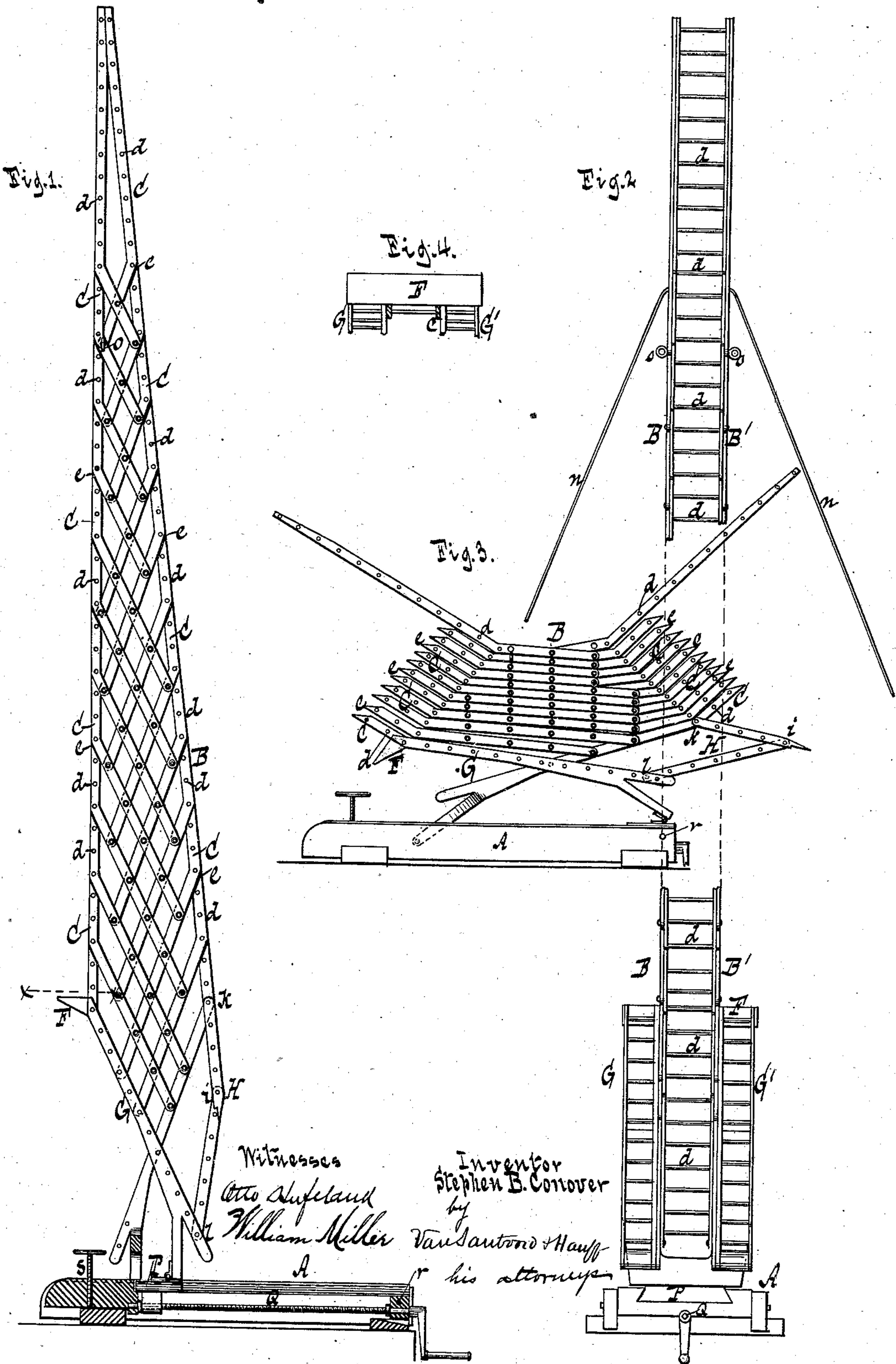
(No Model.)

S. B. CONOVER.
Fire Escape.

No. 239,451.

Patented March 29, 1881.

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UNITED STATES PATENT OFFICE.

STEPHEN B. CONOVER, OF NEW YORK, N. Y.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 239,451, dated March 29, 1881.

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

To all whom it may concern:

Be it known that I, STEPHEN B. CONOVER, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Fire-Escapes, of which the following is a specification.

The primary object of this invention is to obtain a fire-escape which shall supersede the extensible ladders hitherto used, both as to safety and facility of operation; and it consists in the construction of lazy-tongs to form a safety ladder or ladders; also, in certain details, as hereinafter fully described, and pointed out in the claims.

This invention is illustrated in the accompanying drawings, in which Figure 1 represents a part side view and part section, showing the structure in a position for use. Fig. 2 is a front view. Fig. 3 is a side view when the parts are folded. Fig. 4 is a horizontal section on the line *x x*, Fig. 1.

Similar letters indicate corresponding parts.

The letter A designates a frame at the base of the structure, and B B' two sets of lazy-tongs rising from such frame parallel to each other. Both sets of lazy-tongs B B' are constructed with extensions C, and the extensions of one set are connected with those of the other by means of rounds *d*. When the lazy-tongs B B' are elongated or raised to the position shown in Fig. 1 the extensions C coincide with each other, while the rounds *d* are at the same time brought into a straight line with each other, so that the whole takes the shape of a ladder. The extensions C are at the outer or upper ends of the limbs of the lazy-tongs B B', and two sets of extensions are used to each set of lazy-tongs, as clearly shown, so that there is a ladder both at the front and back of the structure; but if desired one set of the extensions may be omitted. In order to adapt the extensions C to coincide with each other in the raised condition of the lazy-tongs, the extensions are made of angular shapes, and the same are, moreover, beveled at their extremities, as at *e*, in a suitable manner to cause each extension to fit snugly beneath the one above it. This bevel *e* is made for the purpose of increasing the effect of the angles in the extensions C, and also to cause one extension to

act as a brace or support to the other, thereby increasing the strength or stability of the structure.

The limbs of the lazy-tongs B B' are made of gradually-decreasing length toward the top of the structure, so that the whole obtains a tapering form when the lazy-tongs are elongated, as indicated in Fig. 1. The advantage gained by this arrangement of the lazy-tongs B B' is that when the structure is moved up against a building of approximately equal height thereto, either of the two escape-ladders is accessible to persons on the roof. In this example the extensions C on the top limbs of the lazy-tongs are elongated, so as to cause the same to unite at their ends, and the lazy-tongs, moreover, are so arranged that the back of the structure is perpendicular or parallel to the front of the building against which it may be placed.

To one of the lower limbs of the lazy-tongs B B', and preferably at the upper ends thereof, is secured a platform, F, while from this platform and along the sides of such lower limbs extend ladders G G'. The platform F is situated on what I have termed the "back" of the structure, and it will be readily seen that by its means, and the ladders G G', persons descending by the back escape-ladder are enabled to reach the front and lower part of the structure without difficulty.

On the front of the structure is arranged a ladder, H, which is a continuation of the front escape-ladder, and is a medium for reaching the lower part of the structure to persons descending by the front ladder. This ladder H is jointed, as at *i*, while it is pivoted at its upper end to one of the lower limbs of the lazy-tongs, as at *k*, and at its lower end to the other of such limbs, as at *l*, so that this jointed ladder folds up together with the lazy-tongs, as indicated in Fig. 3.

To the upper portions of the lazy-tongs B B' may be connected guy-ropes *n*, and to the sides thereof may be applied eyes *o*, or equivalent devices, for supporting fire-hose.

For the purpose of operating the lazy-tongs B B', I connect one of their lower limbs to the base-frame A and the other to a slide, P, which works in guideways on such frame, and which is mounted on a screw-spindle, Q, so that by

turning the latter in one or the other direction the slide is moved accordingly, and the lazy-tongs are raised or lowered, as the case may be. The screw-spindle Q has its bearings in the
 5 base-frame A, and, besides serving to operate the lazy-tongs, it acts as a stop to hold the same in any position to which they may be adjusted. Other mechanisms, however, may be substituted for the one described for operating the
 10 lazy-tongs.

In practice I mount the base-frame A upon a suitable truck or carriage for taking the same to the required spot, and I usually hinge such frame, as at r, and combine therewith a set-
 15 screw, s, to permit the adjustment of the lazy-tongs in their elongated condition.

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

1. A fire-escape embodying two parallel sets
 20 of lazy-tongs constructed with extensions adapted to coincide with each other, and rounds connecting the extensions of one set with those of the other, in combination with mechanism for operating the lazy-tongs, the
 25 whole constructed and adapted for use substantially as described.

2. A fire-escape embodying two parallel sets of lazy-tongs constructed with angular extensions beveled at their extremities and rounds
 30 connecting the extensions of one set with those of the other, in combination with mechanism for operating the lazy-tongs, the whole con-

structed and adapted for use substantially as described.

3. A fire-escape embodying two parallel sets of lazy-tongs, which are constructed with extensions connected by rounds, as set forth, and the limbs of which are made of gradually-decreasing length toward the top of the structure, in combination with mechanism for oper-
 40 ating the lazy-tongs, the whole constructed and adapted for use substantially as described.

4. The combination, with the two sets of parallel lazy-tongs B B', connected by rounds, forming two ladders, of the supplemental lad-
 45 ders G G', arranged at the outside of the lazy-tongs, on opposite sides of the same, and extending along the lower limbs thereof from the rear to the front of the structure, substantially as shown and described.

5. The combination, with two parallel sets of lazy-tongs constructed with extensions connected by rounds, as set forth, of a jointed ladder connected to the lower limbs of the lazy-
 50 tongs, as shown, and mechanism for operating the lazy-tongs, the whole constructed and adapted for use substantially as described.

In testimony-whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

STEPHEN B. CONOVER. [L. S.]

Witnesses:

J. VAN SANTVOORD,
 CHAS. WAHLERS.