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C. C. J. WOOD.
Fire-Escape.

No. 227,401.

Patented May 11, 1880.

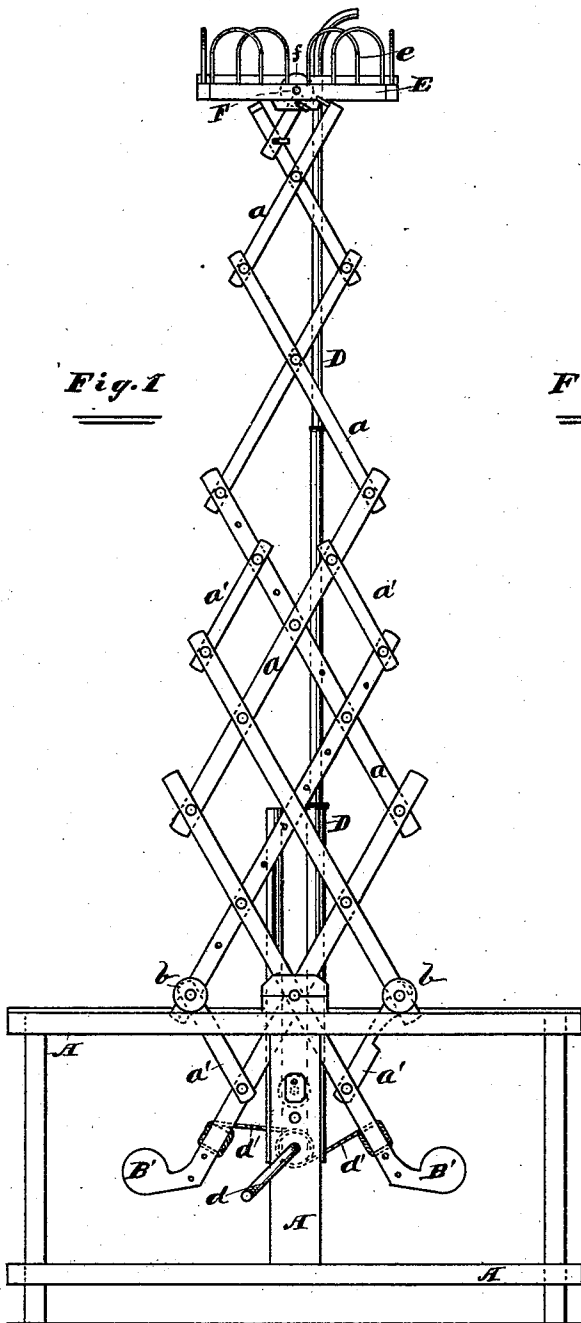


Fig. 1

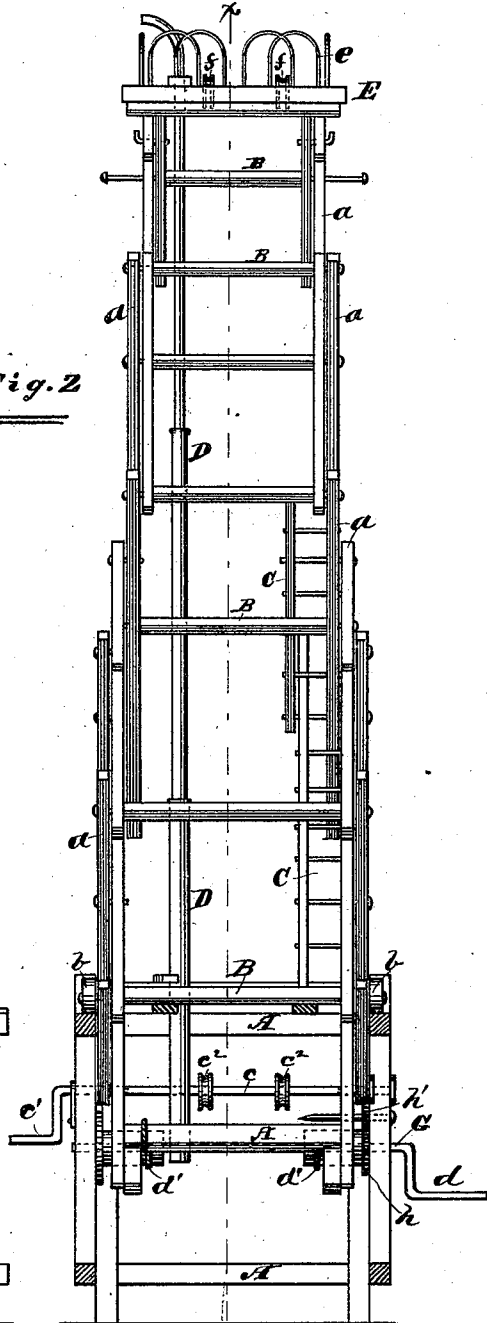


Fig. 2

Attest:

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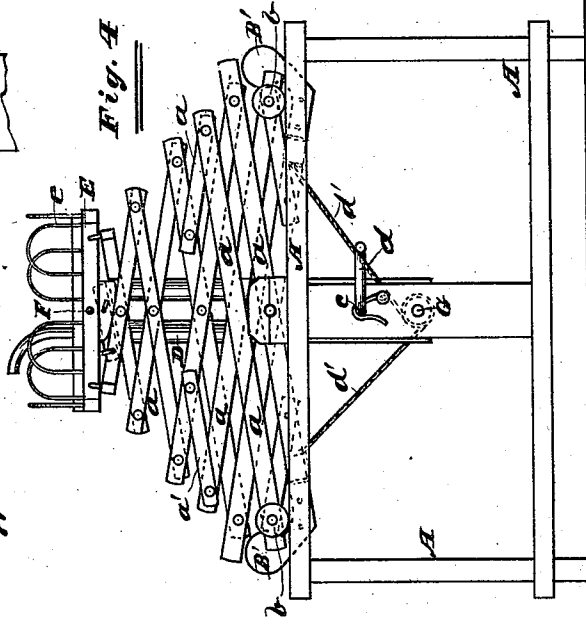
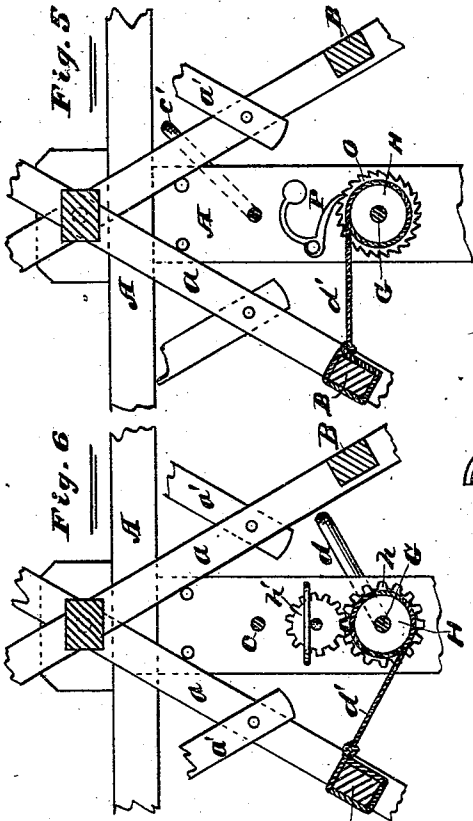
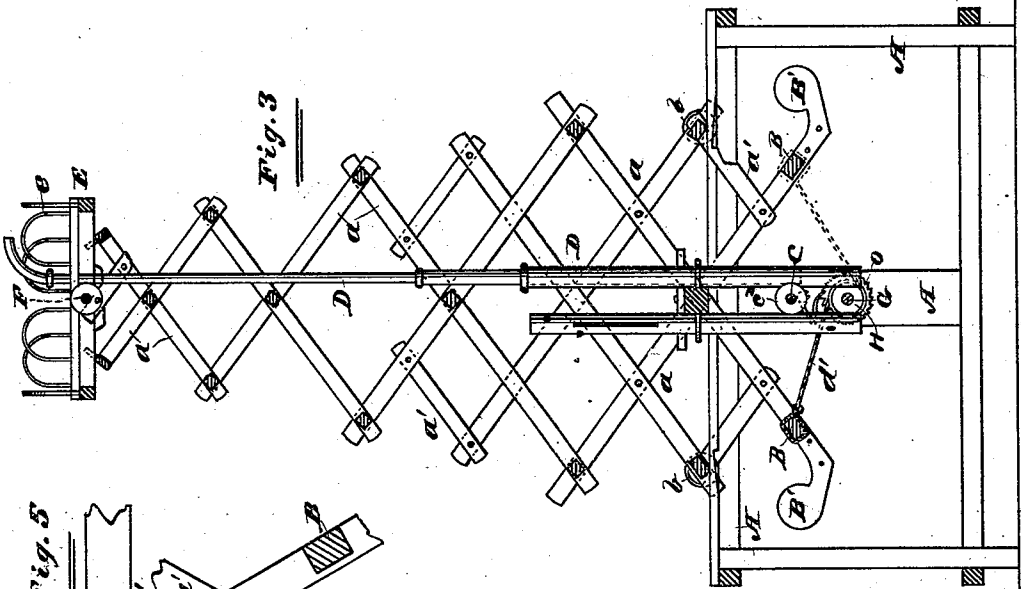
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UNITED STATES PATENT OFFICE.

CHARLES C. J. WOOD, OF CHICAGO, ILLINOIS.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 227,401, dated May 11, 1880.

Application filed February 20, 1880.

To all whom it may concern :

Be it known that I, CHARLES C. J. WOOD, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in a Fire-Escape Ladder and Elevator, of which the following is a description of the construction and operation, which will enable others skilled in the art to which my invention appertains to understand and make use of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation, showing the parts extended; Fig. 2, an end elevation of the same; Fig. 3, a detail view of one side, looking outward from the line *xx*, Fig. 2; Fig. 4, a side elevation, the parts being folded or closed; and Figs. 5 and 6, detail views.

The object of this invention is the improved construction of a combined fire-escape ladder and elevator operated by a system of lazy-tongs, the exact arrangement and construction of which will hereinafter be more fully pointed out and explained in detail.

In referring to the drawings, A represents the supporting frame-work and the lower platform, which may be combined and constructed, in connection with a suitable carriage or trucks, as a convenient means of transporting the device from place to place, adapting the same to be used as a fire-escape, and when the device is to be employed for purposes other than that of a fire-escape the supporting frame-work may be constructed as herein shown.

a a a are a series of diagonal bars, forming the system of lazy-tongs, being connected together and having axial bearings, as shown.

a' a' are short bars, which connect and are attached to the longer bars *a*, and are for the purpose of imparting additional strength and support to these parts.

B represents the horizontal cross-bars forming the connections between the two sides of the lazy-tongs. B' are counterpoise weights or balances attached to the lower ends of the lazy-tongs, and are for the purpose of assisting in giving an easy movement to the parts when being operated. *b* are smooth pulleys attached to the lazy-tongs, and travel in a horizontal line on the top part of the frame A, and moving in and out as the parts are extended or folded, as the case may be.

C is an ordinary hand-ladder, which may be

used as a means of ascent and descent when the device is extended, and is so connected as to form a part of the lazy-tongs system, opening and closing with the same.

D represents a telescopic pipe, to be used as a water-conductor by attaching hose to both ends, the pipe being lengthened or shortened by the operation of the lazy-tongs.

E represents the upper platform, and *e* the safety-railing surrounding the same. *c* represents a shaft, having the crank-handle *c'* and carrying the two grooved pulleys *c''*.

In the upper platform, E, is placed the corresponding shaft F, carrying the grooved pulleys *f*, this mechanism to be employed, in connection with suitable ropes and a life-saving basket, in lowering persons to a place of safety.

G represents the operating-shaft, and *d* the handle attached thereto. H are drums placed upon the shaft G, and around which the ropes *d'*, connecting with the lazy-tongs, are made to coil as the device is being extended. *h h'* are gear-wheels which engage with each other, and may be adapted to control the closing or folding of the lazy-tongs, as well as the extension of the same.

O represents a ratchet-wheel located on the shaft G, and P a pawl adapted to engage with the same, by means of which the device is securely locked at any desired point.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a fire-escape and elevator combined, the combination, with the system of lazy-tongs herein shown and described, of the ladder or ladders C and the counterpoise or weights B', substantially as described.

2. In a fire-escape ladder and elevator, the combination of the following elements, viz: the system of lazy-tongs consisting of the long diagonal bars *a a a*, the short bars *a' a'*, the horizontal bars B, the smooth pulleys *b*, the ladder or ladders C, telescopic pipe D, the upper platform, E, the counterpoise or balance weights B', ropes *d'*, drums H, and the operating-shaft G, all being connected, arranged, and operating substantially as herein shown and described.

CHARLES C. J. WOOD.

Witnesses:

L. A. BUNTING,
THOMAS DUNCAN.