

No. 836,868.

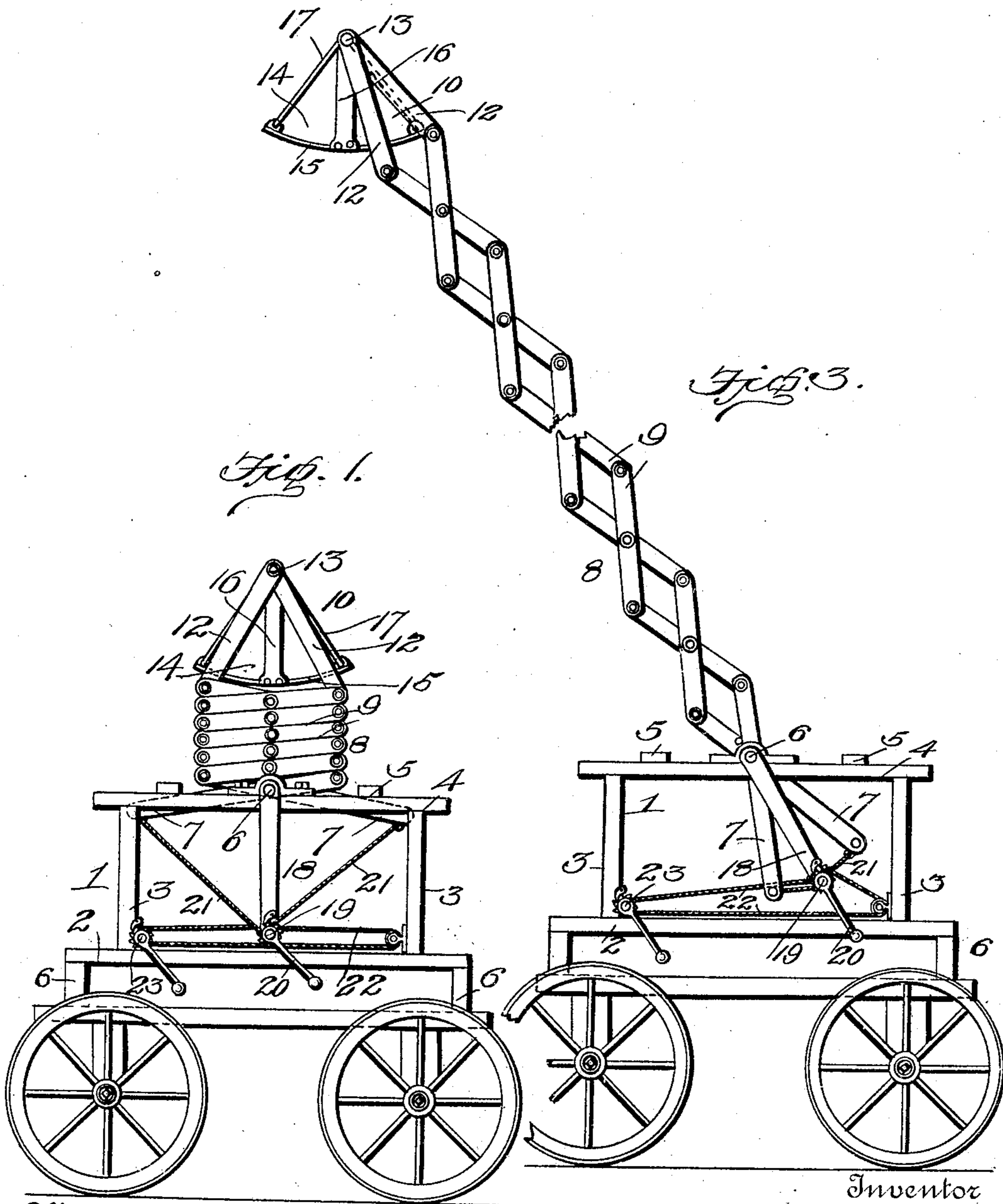
PATENTED NOV. 27, 1906.

J. C. DANGERFIELD.

FIRE ESCAPE.

APPLICATION FILED MAR. 29, 1906.

2 SHEETS—SHEET 1.



Witnesses
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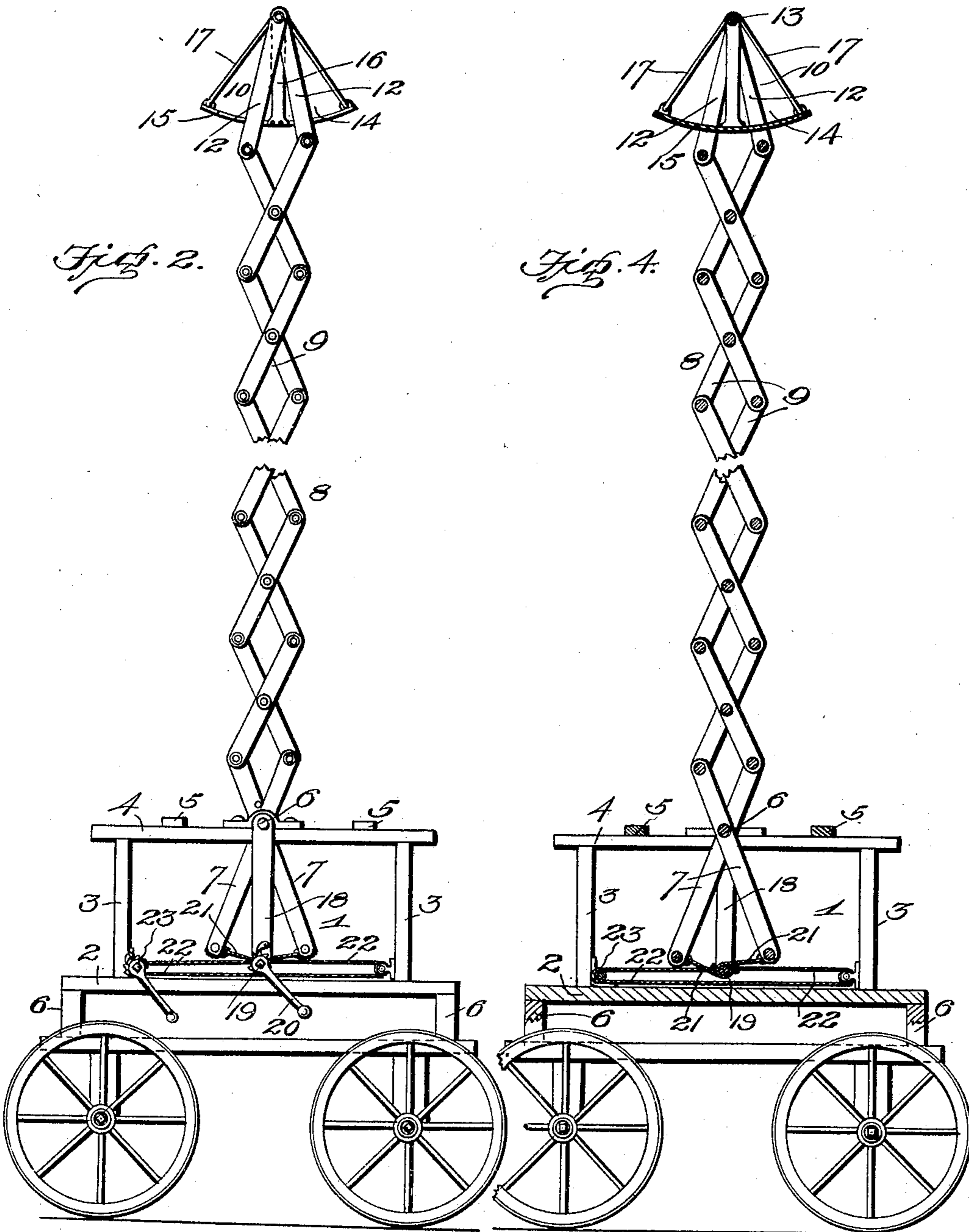
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UNITED STATES PATENT OFFICE.

JOHN C. DANGERFIELD, OF EAST GRAND FORKS, MINNESOTA.

FIRE-ESCAPE.

No. 836,868.

Specification of Letters Patent.

Patented Nov. 27, 1906.

Application filed March 29, 1906. Serial No. 308,706.

To all whom it may concern:

Be it known that I, JOHN C. DANGERFIELD, a citizen of the United States, residing at East Grand Forks, in the county of Polk and State of Minnesota, have invented certain new and useful Improvements in Fire-Escapes; and I do 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.

This invention relates to improvements in fire-escapes.

The object of the invention is to provide a portable fire-escape adapted to be elevated to various heights and to be tilted or oscillated to one side or the other to enable the upper end of the same to be brought in proximity with windows or other exits of a burning building; whereby the occupants of the latter may be removed and brought safely to the ground or carried across the street to another building.

With the above and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side view of the device, showing the same in a lowered position. Fig. 2 is a similar view showing the same in an elevated position. Fig. 3 is a side view showing the device elevated and tilted laterally upon its supporting-base, and Fig. 4 is a vertical sectional view of the device in an elevated position.

Referring more particularly to the drawings, 1 denotes the supporting base or frame, which is here shown and is preferably arranged upon a suitable truck or wagon, by means of which the device may be quickly transported from one place to another. The supporting-frame 1 preferably consists of lower longitudinally-disposed bars 2, near each end of which are secured uprights 3, connected at their upper ends by upper longitudinally-disposed bars 4, said upper and lower longitudinal bars being connected by cross-bars 5 and 6.

Pivotally mounted in suitable bearings upon the upper longitudinal bars 4 is a transversely-disposed shaft 6, on which is pivotally mounted the lower arms 7 of a lazy-tong shaft 8. The upper arms 9 of said shaft are arranged and pivotally connected together

after the manner of the ordinary form of lazy-tong construction. The extreme upper arms of the lazy-tong shaft have pivotally connected thereto a supporting-frame 10, consisting of inclined side bars 12, which are pivotally connected at their lower ends to the upper ends of the lazy-tongs, the upper ends of said side bars being pivotally connected to a transversely-disposed shaft 13, upon which and between the bars 12 is pivotally suspended a basket or car 14, adapted to receive the occupants from a burning building when the device is in an operative position.

The car 14 may be of any suitable construction, but is here shown as consisting of a slightly-curved platform 15, which is connected midway between its ends to supporting arms or bars 16, the upper ends of which are pivotally connected to the shaft 13. The outer ends of the platform 15 are connected to the shaft 13 by brace-rods 17. A car constructed and supported as above described will always assume a horizontal position, irrespective of the position to which the lazy-tong shaft may be turned.

The lower arms 7 of the lazy-tongs are pivotally mounted upon the shaft 6 in such a manner that the lower portions of the same are of considerably greater length than the upper portions, thereby providing levers by which the lazy-tongs shaft may be raised or lowered. Fixedly mounted on the outer projecting end of the shaft 6 is a depending frame 18, in the lower end of which is journaled a winding-shaft 19, with one end of which is adapted to be engaged a crank-handle 20, whereby said shaft may be turned. The lower ends of the arms 7 are connected to the winding-shaft 19 by means of a cord or cable 21, which when the winding-shaft is turned in one direction will be wound thereon, thereby drawing the upper and lower ends of the arms 7 together, which operation will actuate the upper arms of the lazy-tong shaft thereby extending or elevating the same, as will be understood. A reverse movement of the winding-shaft will permit the lower arms 7 to operate, thereby allowing the shaft to lower.

Connected to the opposite sides of the lower end of the frame 18 are the opposite ends of tilting-cables 22, said cables passing around guide-pulleys secured to the uprights 3 at one end of the supporting-frame and are wound around a shaft 23, journaled in the supporting-frame adjacent to the op-

posite uprights thereof, whereby when said shaft is turned in one direction one end of the cable 22 will be wound up and the other end unwound, thus tilting the lazy-tong shaft in
5 one direction; and when said shaft 19 is turned in the opposite direction the cable will be wound and unwound in the proper manner to tilt the shaft in the opposite direction, as will be understood.

10 A fire-escape constructed as herein shown and described may be quickly raised to the desired elevation and may be readily swung from a burning building on one side of the street to the buildings on the opposite side
15 or may be quickly lowered, thus removing the occupants of a burning building to a place of safety.

The construction of the device is such that a great deal of weight may be safely carried
20 at its upper end, thus facilitating the quick removal of occupant or valuable possessions from a burning building

From the foregoing description, taken in connection with the accompanying drawings,
25 the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion,
30 resorted to without departing from the prin-

ciple or sacrificing any of the advantages of this invention as defined by the appended claim.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is— 35

In a fire-escape, the combination with a supporting-frame, having a transversely-disposed shaft journaled thereon, a lazy-tong tower provided with downwardly-extending
40 lower arms pivotally mounted on said transversely-disposed shaft, arms extending downwardly from said shaft on opposite sides of said tower, and provided with a roller, a crank-handle on said shaft for extending
45 said tower, a tilting mechanism to swing said tower laterally in one direction or the other, said tilting mechanism comprising two rollers and a cable, said cable passing over said rollers and around the roller between the
50 downwardly-extending arms, substantially as described.

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

JOHN C. DANGERFIELD.

Witnesses.

J. R. JOHNSON,

G. R. JACOB.