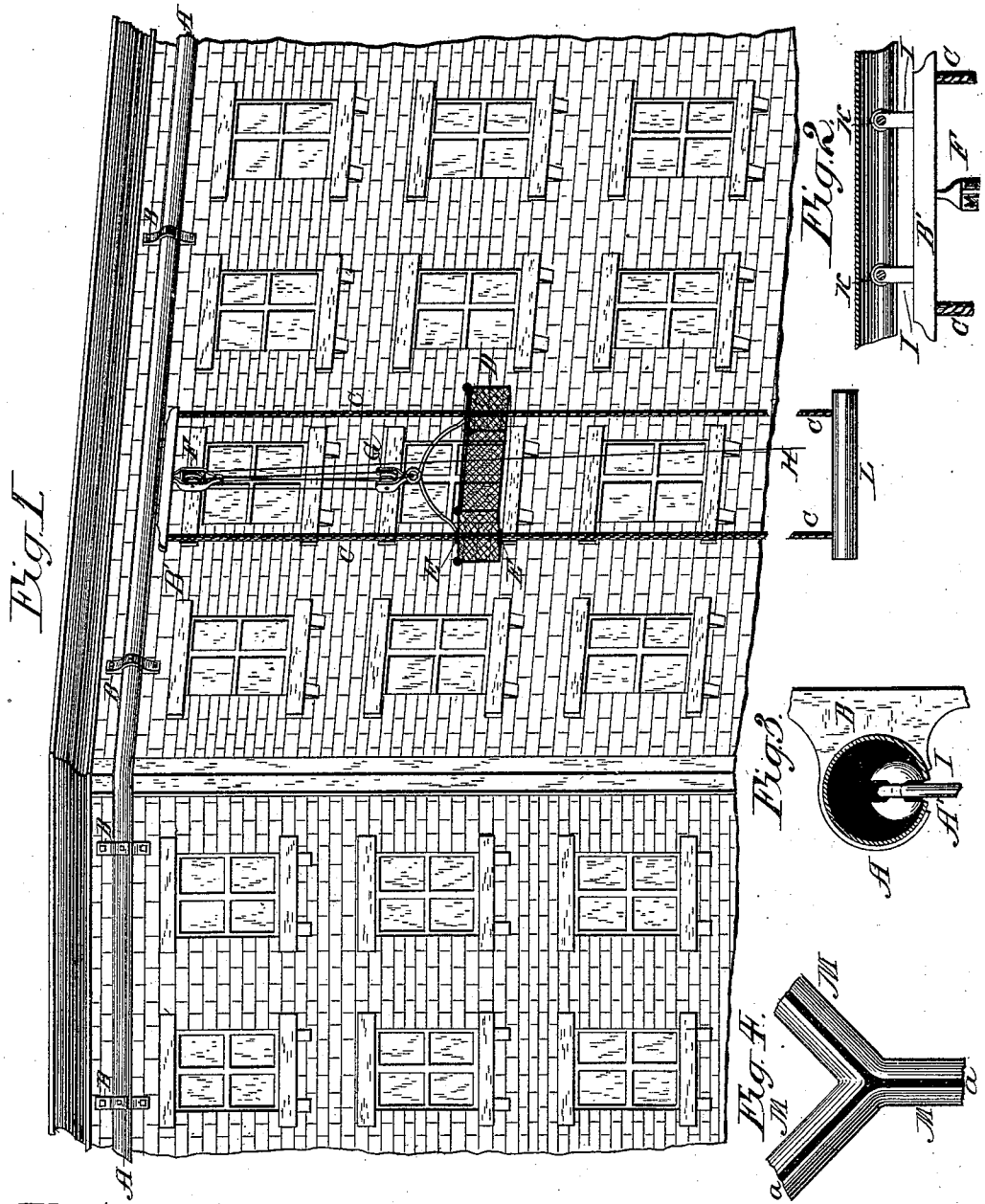
(No Model.)

C. F. BIERBACH.

FIRE ESCAPE.

No. 287,410. Patented Oct. 30, 1883.



Witnesses:
C. B. Story.
George E. Bierbach

Inventor:
Charles F. Bierbach
By Jas. P. Ewin
Attorney:

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

CHARLES F. BIERBACH, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO ALBERT G. BIERBACH, OF SAME PLACE.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 287,410, dated October 30, 1883.

Application filed February 19, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. BIERBACH, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Vertical and Horizontal Movable Fire-Escapes; and I 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.

The object of my invention is to provide a vertically and horizontally moving elevator, the car of which is provided with and adapted to be moved upon a continuous tramway along any of the exterior walls or entirely around a building, whereby all places of exit are readily reached, said car being so inclosed and sustained by its guideways as to render it safe to its occupants, whereby women, invalids, and children may be rescued from the building without any personal effort on their part, and without danger of falling or being thrown from the car.

The construction of my invention is further explained by reference to the accompanying drawings, in which—

Figure 1 represents a perspective view of a building provided with my invention. Fig. 2 represents a longitudinal section of the tramway, with the rollers and supporting-bar from which the guideways and car are suspended. Fig. 3 is a cross-section of the tramway, showing one of the rollers. Fig. 4 represents a bottom view of a switch in the tubular tramway, by which the car is led from the main to the branch ways, as may be required.

Like parts are represented by the same reference-letters throughout the several views.

A is the tramway, which is tubular in form, and is provided with a slot, A′, through its lower side for the reception of the hangers I I. The tramway A is supported by brackets B. From the tramway A are suspended two rods or cables, C C, which serve as guideways for the elevator-car D, the car being provided with guide-bearings E E E E, one end of which bearings E is rigidly attached to the car, and their other ends are provided with holes for the reception of said rods or cables C C, through which holes they move freely upward and downward as the car is raised or lowered. It is obvious that the car being thus supported at both the top and bottom of its respective sides, it is securely retained in a true vertical position and prevented from tipping, swinging, or turning, thereby obviating all danger of its occupants being thrown therefrom or injured.

F and G are ordinary pulley-tackles, which are provided with cable H, which extends to the ground, where it is controlled. The upper pulley-block, F, is attached to the bar B′, and the lower one, G, is connected with the top of the car. The car is raised by drawing down on said cable H, and lowered by releasing the same.

A greater or less number of pulleys may be used in the tackle, according to the weight to be elevated and controlled by them.

The upper ends of the cables C C are attached to the bar B′. The bar B′ is connected to the traveling rollers K K by hangers I I. The slot in the lower side of the tubular tramway permits the hangers to move through the same from one end to the other, or entirely around the building in either direction, whereby the elevator-car ways, pulley-tackle, &c., may be quickly brought to any window or place of exit in any story of the building.

It is obvious that in case it becomes necessary to pass a burning portion of the building between the upper story or place of exit and the ground, the elevator may be moved laterally to either side of the flames before raising or lowering the same. But one car, or any number desired, may be used. When more than one car is used, they are connected together by flexible attachments, which, when lowered and emptied, permit the cars to come in contact, whereby persons in the upper one may more easily alight. The lower ends of the cables are connected together by a heavy bar, L, by the weight of which they are kept tense and rigid, which condition is more favorable for the upward and downward movement of the car thereon.

When desirous to move the elevator-car from

the main tramway, a tubular switch, having slots like that shown in Fig. 4, is provided, the respective arms M of which are connected to the tramway A by slotted coupling-rings, whereby the course of the car may be changed from one tramway to another, as occasion may require.

I am aware that a tramway has previously been used for supporting pulley-tackle, as shown in patent granted to J. W. Mackenzie, No. 33,710, Nov. 12, 1861. I therefore make no claim to the device therein shown.

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

1. The combination of the slotted tubular tramway A with the carriage, consisting of the double-flanged rollers K, having bearings on the respective sides of the slot in said tramway, hangers I I, suspended centrally from said rollers, between their respective flanges, within the slot of said tramway, bar B′, rigidly attached to the respective hangers, and adapted to sustain the vertical-moving car suspended therefrom, while said double-flanged rollers support said car directly beneath the supporting-tramway, all substantially as and for the purpose specified.

2. A tubular slotted switch for tramways, having three or more arms, M M M, and slots *a*, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES F. BIERBACH.

Witnesses:
JAS. B. ERWIN,
C. B. STORY.