No. 848,640.

PATENTED APR. 2, 1907.

M. W. DALTON.

FIRE ESCAPE.

APPLICATION FILED MAR. 15, 1906.

Fig. 1.

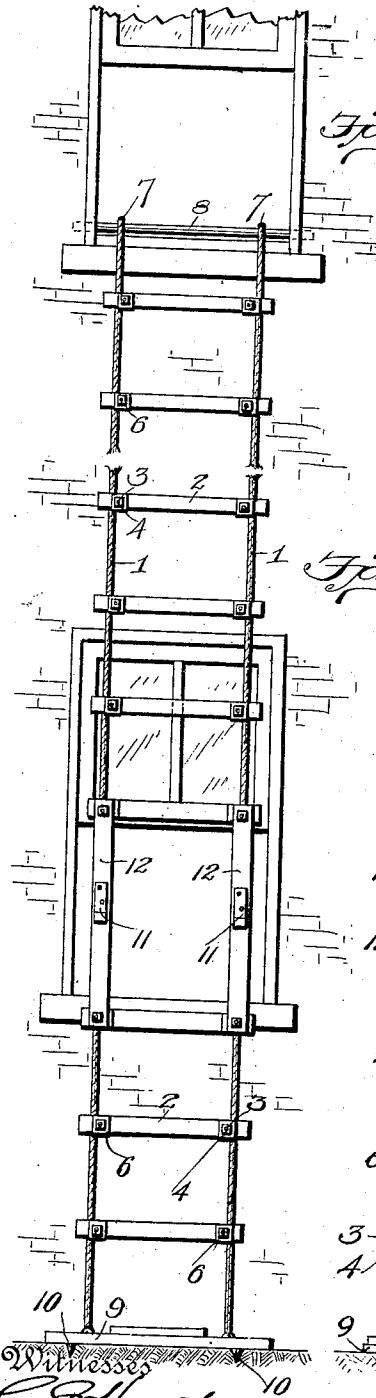


Fig. 2.

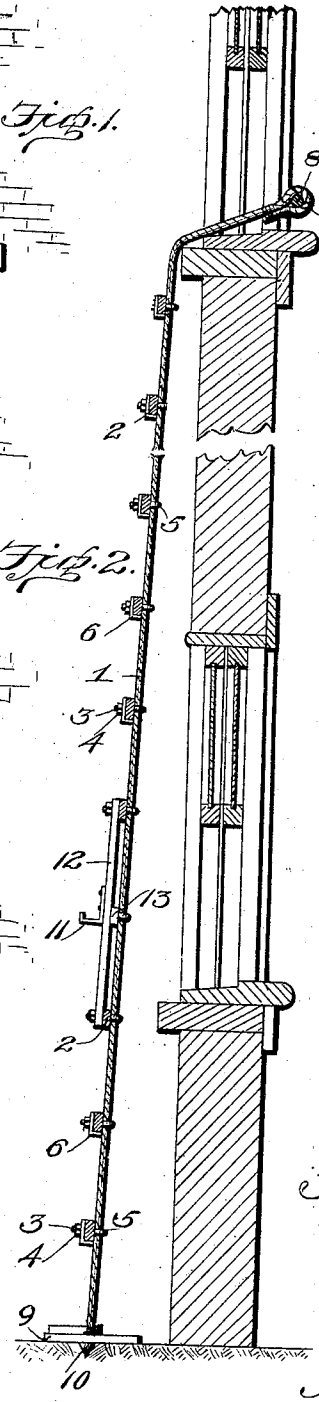


Fig. 3.

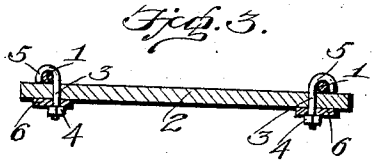


Fig. 4.

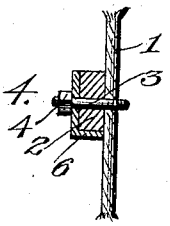


Fig. 5.

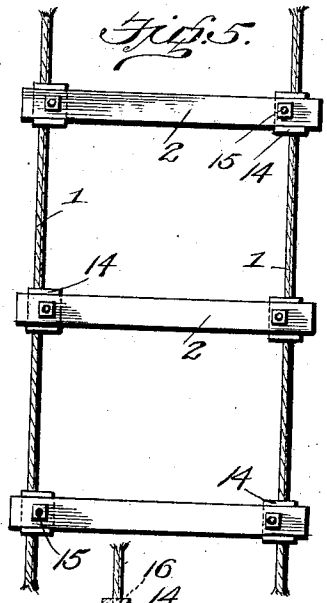
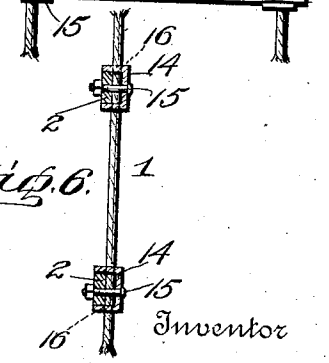


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

MATHEW WILLIAM DALTON, OF WILLARD, UTAH.

FIRE-ESCAPE.

No. 848,640. Specification of Letters Patent. Patented April 2, 1907.

Application filed March 15, 1906. Serial No. 306,284.

To all whom it may concern:

Be it known that I, MATHEW WILLIAM DALTON, a citizen of the United States, residing at Willard, in the county of Boxelder and State of Utah, 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.

My invention is an improved fire-escape and scaffold bracket adapted for use both for the purposes of the fire-escape and ladder and for the purposes of a building-bracket to support scaffolding; and it consists in the construction, combination, and arrangement of devices hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a fire-escape ladder embodying my invention, showing the same in position for use. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a detail sectional view. Fig. 4 is a detail sectional view taken through one of the rungs and washer-plates. Fig. 5 is a detail elevation showing a modified construction of the ladder. Fig. 6 is a detail sectional view of the same.

My improved ladder comprises a pair of ropes or cables 1 and a series of rungs or bars 2. The end portions of the said rungs or bars, which are preferably made of wood, bear on the ropes 1, which are preferably made of wire and are secured thereto in the form of my invention shown in Figs. 1 and 2 by means of bolts 3 and nuts 4, with which said bolts are provided. Each of the said bolts is formed at one end with a hook 5 to engage one of the ropes, and the stem of the bolt extends through one of the bars or rungs. The outer and lower sides of each of the bars or rungs is covered by an L-shaped washer-plate 6, which is made of iron or other suitable metal and is interposed between the bar or rung and the nut 4 of the bolt. The upper ends of the ropes or cables 1 are formed with loops 7 to receive a rod or bar 8, which is passed therethrough and bears against the inner side of the wall of a building at a window, through which the upper portion of the ladder is passed, so that the ladder can extend downwardly to the ground. To the lower end of the ladder is attached a frame 9, which is suitably weighted and is provided with pins 10, which project from the bottom thereof and which enter the ground to prevent the lower end of the ladder from moving when the ladder is in use.

One or more of the rungs or bars of the ladder are omitted at points in the ladder which will register with windows in a wall to enable persons to pass through such windows and through the ladder, so as to get on the outer side thereof. At such points the ladder is provided with steps 11, which are substantially L-shaped, and are secured by means of bolts or screws to bars 12, which are parallel with the ropes or cables of the ladder, have their upper and lower ends secured to certain of the bars or rungs thereof, and have their intermediate portions, which are spaced from the ropes or cables, braced by spaced blocks 13.

In Figs. 5 and 6 I show a modification in the construction of my improved ladder, in which I employ channel-irons 14 at the ends of the rungs or bars, secured on the inner sides thereof by means of the bolts 15, and provided in their upper and lower sides with openings 16, through which the ropes or cables pass, the ladder being interposed between the intermediate portions of the channel-irons and the rear sides of the bars or rungs. The bolts 15 serve to clamp the ropes or cables between the bars or rungs and the channel-irons to secure the bars or rungs permanently to said ropes or cables.

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

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention as defined by the appended claims.

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

1. The herein-described flexible fire-escape ladder comprising the ropes or cables, the cross-bars or rungs bearing on one side thereof, channel-irons bearing on the opposite side thereof engaging said rungs or bars and having openings through which the ropes or cables pass, and bolts passed through said channel-irons and bars and clamping them to

the opposite sides of the ropes or cables, substantially as described.

2. The herein-described flexible fire-escape ladder comprising the ropes or cables, the rungs or cross-bars connecting them together, the steps interposed between certain of the rungs or cross-bars, and parallel bars to which said steps are secured and having their upper and lower ends secured to certain of the cross-bars or rungs, substantially as described.

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

MATHEW WILLIAM DALTON.

Witnesses:

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S. N. COOK.