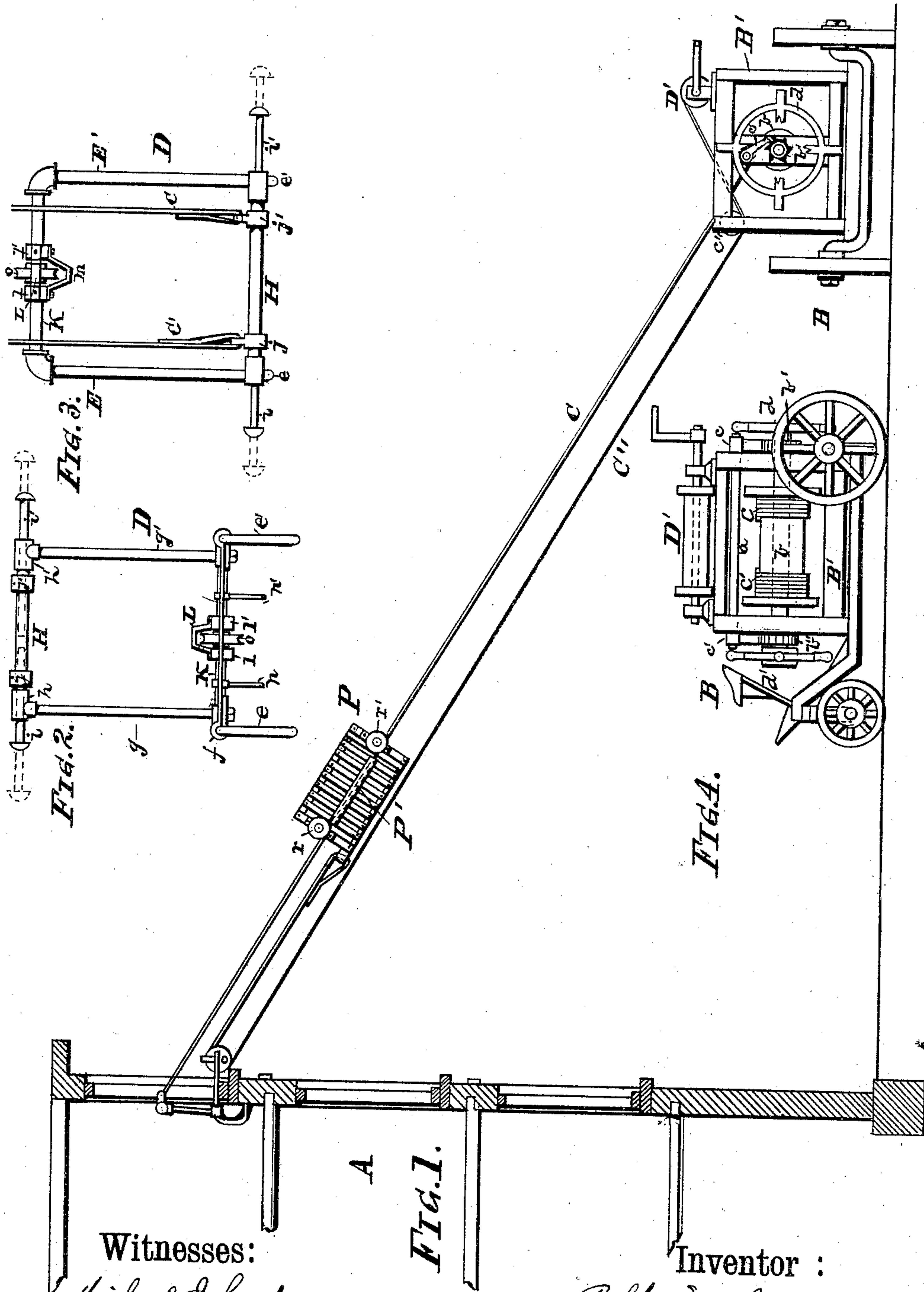


(No Model.)

R. MATTHAES.
FIRE ESCAPE.

No. 426,540.

Patented Apr. 29, 1890.



Witnesses:

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UNITED STATES PATENT OFFICE.

ROBERT MATTHAES, OF BUFFALO, NEW YORK.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 426,540, dated April 29, 1890.

Application filed February 20, 1890. Serial No. 341,127. (No model.)

To all whom it may concern:

Be it known that I, ROBERT MATTHAES, of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements on Fire-Escapes; and I do hereby declare that the following description of my said invention, taken in connection with the accompanying sheet of drawings, forms a full, clear, and exact specification, which will enable others skilled in the art to which it appertains to make and use the same.

This invention has general reference to portable fire-escapes for fire-departments and the like; and it consists, essentially, in the novel and peculiar combination of parts and details of construction, as hereinafter first fully set forth and described, and then pointed out in the claims.

In the drawings forming a part of this application, Figure 1 illustrates a section of a building with my improved fire-escape attached thereto. Fig. 2 is a rear view of the window-platform which is affixed to the window. Fig. 3 is a plan of the same. Fig. 4 is a side view of the truck.

Corresponding letters of reference are used to represent like parts in the several figures.

My present invention has for its object the production of a substantial and efficient portable fire-escape for use as a part of the equipment of fire-departments of cities. In order to attain this end I construct my device as illustrated in the drawings before mentioned, in which—

A represents a building on which my device is temporarily being used, as in cases of fire.

B is the truck containing the tensioning and hoisting gear, and is preferably provided with bent axles to bring the center of gravity as low as possible. It is further provided with a strong platform running from the rear to the front axle. Upon this platform is secured the frame-work B', arranged longitudinally upon the same, and is provided centrally with a drum b, fastened upon a shaft journaled in the ends of the frame. Near the ends of this shaft, outside of the frame, are fastened ratchet-wheels b' b'', engaged by pawls c c'. These pawls are both fastened upon a shaft a, whereby when one of the pawls is raised out

of engagement of its wheel the other pawl will also be raised out. On the ends of the drum-shaft and adjacent to the ratchet-wheels are secured two tension-wheels d d' to tauten the cables C C' when the device is in use.

Upon the drum b hereinbefore mentioned are wound two cables C C' of sufficient length to reach to the top of the highest building upon which the escape is to be used, and are wound parallelly and at some distance apart upon the same. The free ends of the cables before mentioned are secured to connections or eyes j j' upon the window-platform D. The object of this platform is to afford a fastening for the cables when the same are brought up to a window, and is adapted to pass through the opening of the same and to be removably secured inside. It is provided with two base-rods E E', from one end of which lead downwardly-pointing hooks e e', engaging the inner wall of the building below the window-sill, as clearly shown in Fig. 1. Adjacent to these hooks, on the rods E E', is fastened a connecting-rod f, to connect the said rods together. This connecting-bar is provided with two upwardly-pointing standards g g', to the upper ends of which are screwed T's h h', connected together by a tube or pipe H, upon said pipe being secured two connections j j' for the cables before mentioned. From the opposite ends of the T's h h' extend extension-bars i i', fitting loosely in the T's and in the interior of the pipe H, and are adapted to hold the window-platform in position by being drawn out and bearing against the inner wall of the building beyond the window-opening. The outer ends of the base-rods E E' are connected together by a rod K, which is provided centrally with a loosely-fitting sheave o, which has on each side collars l l', to prevent end motion. Upon these collars are fastened yokes L m, respectively, one in a horizontal and the other in a vertical position, which yokes extend over and beyond the sheave, forming a guard to prevent a rope C' from "jumping" the sheave and becoming jammed.

Upon the cables C C' is suspended a carriage P, provided with wheels r r', fitting the cables, so that the carriage can be easily moved upon the same. Between the wheels,

on both sides of the carriage and fitting over the cables C' C, are flexible tubes P', or equivalents thereof, whereby persons seated in the carriage may grasp the same and by
 5 compressing and distorting them can produce sufficient friction to lessen the speed of the carriage when descending. To the forward end of this carriage is affixed a rope C'', before mentioned, leading up over the sheave o
 10 on the window-platform and returning to the truck to be wound upon the drum D'.

The operation of this device is as follows: The truck B being run in front of the building, a fireman ascends a ladder raised for the
 15 purpose with the frame D. After reaching the desired window he drops the frame through the window and draws out the rods *i i'* on each side until the same span the window and extend beyond the window-opening.
 20 The cables are now tautened, as before described. The carriage is now run up and the persons to be rescued enter the same, after which it is lowered by the rope C'' and drum D' in an obvious manner.

25 I may use the device as a permanent fixture by removing the frame from the wagon and securing it to the ground.

Having thus fully described my invention, I claim as new and desire to secure to me by
 30 Letters Patent of the United States—

1. The combination, with the frame, of a drum having ratchet-wheels and pawls, as described, tension-wheels at both ends of said

drum, the cables upon said drum and secured to the window-frame, having bars engaging 35 the inner wall of the building underneath the window-sill, and vertical standards engaging the sides of the window, the carriage upon said cables, and the rope for moving the same, as set forth. 40

2. The combination, with the frame and cables, of the window-platform consisting of two base-rods terminating in hook-shaped projections at one end, connecting-rods connecting said base-rods together, vertical standards 45 fastened to the rear connecting-rod, a tube connecting the upper extremities of the standards, extension-rods fitting said tube, a sheave fitting on the forward connecting-rod, a carriage on said cables, and a rope secured to the 50 same and leading over said sheave, as described.

3. The combination, with the truck and cables, of a carriage suspended from said cables, a window-platform consisting of the base-rods 55 E E', connecting-rods *f K*, the vertical standards *g g'*, T's *h h'*, pipe H, extension-rods *i i'*, the sheave o, collars *l l'* and yokes L m thereon, and the rope C'', as described.

In testimony that I claim the foregoing as 60 my invention I have hereto set my hand in the presence of two subscribing witnesses.

ROBERT MATTHAES.

Attest:

MICHAEL J. STARK,
WM. O. STARK.