

W. Miller,

Fire Escape.

No. 107,077.

Patented Sept. 6. 1870.

Fig. 2.

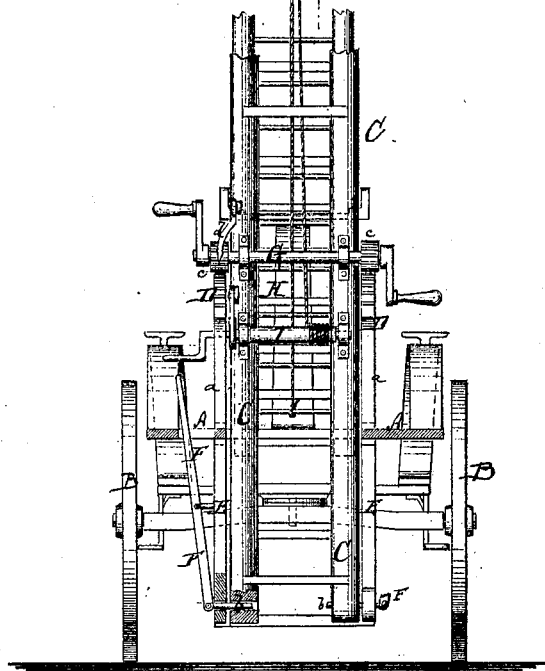
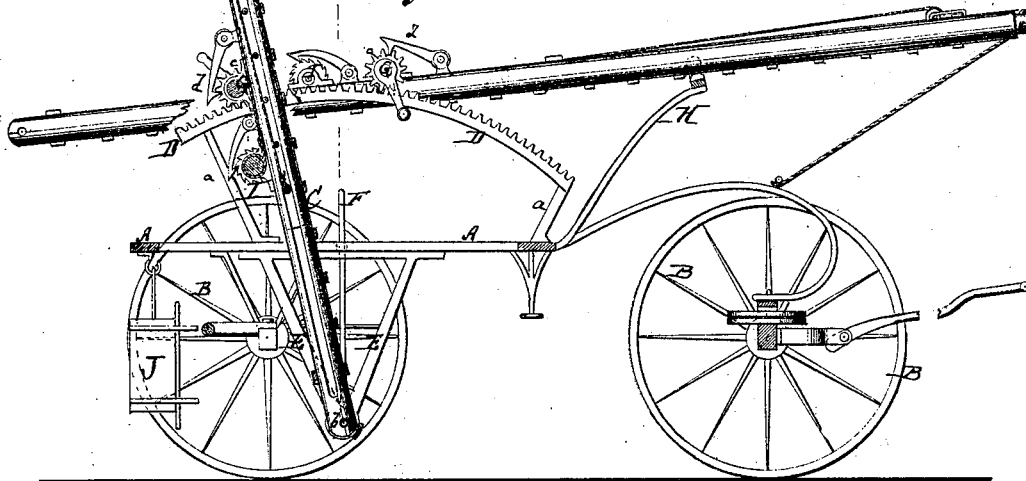


Fig. 1.



Witnesses:

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WILLIAM MILLER, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 107,077, dated September 6, 1870.

## IMPROVEMENT IN FIRE-ESCAPES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM MILLER, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and improved Fire-Escape; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

Figure 1 represents a side elevation, partly in section, of my improved fire-escape.

Figure 2 is an end elevation, partly in section, of the same.

Similar letters of reference indicate corresponding parts.

My invention relates to fire-escapes, and consists in certain improvements thereon, which will be first described in connection with all that is necessary to a full understanding thereof, and then clearly specified in the claim.

A, in the drawing, represents the platform of the truck by which the ladder is supported.

This platform rests on the axles of wheels B B, in the ordinary or suitable manner.

The platform is slotted to let the ladder C pass through it when in the upright position.

The ladder C is made extensible, either by having tubular slotted side-rails, as described in my aforesaid Letters Patent, or by being otherwise of equivalent construction.

Upon standards *a a*, that project from the platform A, are secured two curved racks or toothed segments, D D, one on each side of the truck, and both parallel to each other, as shown.

The lower end of the ladder can be pivoted to pendant frames E of the truck, by means of pins *b*, the said pins passing through the said pendants into the lower ends of the side-rails of the ladder.

The pins *b* are, with their outer ends, secured to the lower ends of levers F, which are pivoted to the truck, so that they can be readily swung to carry the pins out of the side-rails.

On the ladder is hung a shaft, G, which carries at

its ends and at both sides of the ladder pinions *c c*, which mesh into the teeth of the rack D.

When the lower end of the ladder is pivoted to the pendants E, the shaft G can be revolved to swing the ladder into any desired position, in which, when it is obtained, the ladder can be locked by a pawl or catch, *d*, that engages into the cogs of the pinion *c* to lock the same.

The racks D, it will be seen, serve not only as steady adjusting devices for varying the position of the ladder, but they also serve as guides for the sides of the ladder.

When, by swinging the levers F, the pins *b* are withdrawn from the ladder, the latter can be swung into a horizontal position, its front end resting upon a projecting arm, H, of the truck. The pinions *c* rest then also upon the racks D, and will, when revolved, adjust the ladder more or less far forward or backward. By applying the catch *d*, the ladder can also be locked in the horizontal position.

I, in the drawing, represents the windlass, which is hung to the ladder for the purpose of extending the same.

In fig. 1 the ladder is shown in both the vertical and horizontal positions.

When held horizontally the ladder must be tied to the truck.

A suitable box or seat, J, may be used on the ladder, and connected with a rope or chain, so as to be readily elevated or lowered for conveying articles of furniture, persons, or tools, from or towards the upper end of the ladder.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

The combination, with the detachable pins *b b* and frames E E, of the pivoted levers F F, arranged on each side of the truck, as and for the purpose described.

WILLIAM MILLER.

Witnesses:

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