J. F. GREENE.

HYDRAULIC FIRE-ESCAPE.

No. 193,506. Patented July 24, 1877.

Fig. 1.

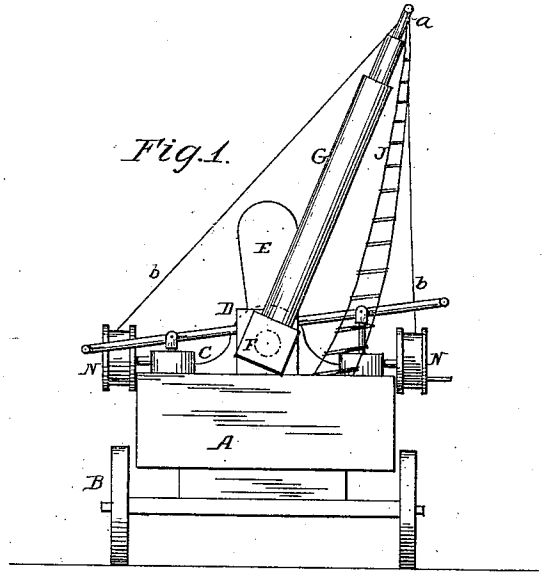
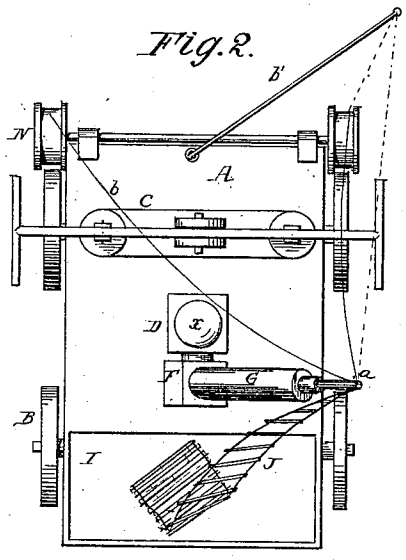


Fig. 2.



Attest:

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By his attorney

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UNITED STATES PATENT OFFICE.

JOHN F. GREENE, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN HYDRAULIC FIRE-ESCAPES.

Specification forming part of Letters Patent No. **193,506**, dated July 24, 1877; application filed June 21, 1877.

To all whom it may concern:

Be it known that I, JOHN F. GREENE, of Brooklyn, Kings county, New York, have invented certain Improvements in Fire-Escapes, of which the following is the specification:

The object of my invention is a fire-escape apparatus constructed, as fully described hereinafter, so as to place a cage, rope, hose, or ladder within the reach of those who may be at the window of a burning building, and, if necessary, carry a stream of water to the same point.

In the accompanying drawing, Figure 1 is an end elevation of the improved apparatus; and Fig. 2 is a plan view.

A is a truck mounted upon wheels B, and adapted to be drawn by hand or by horses, or to be propelled by steam, and provided with a double-acting hand or steam pump, C, by which water or other fluid may be forced into a chest, D, surmounted by an air-chamber, E.

The chest D has a pivoted bearing so that it may be revolved to any desired extent around its vertical axis *x*, and to one side is pivoted the hollow base F of a series of telescopic tubes, G.

The central tube *a* has attached to its upper end the upper end of a rope-ladder, J, the greater portion of which is made into a roll, or is folded and deposited in a receptacle, I, of the truck. To the upper end of the tubes are also secured stay-lines, *b*, which extend from drums N, turning in bearings on the truck.

The truck is also provided with braces *b'*, by means of which the lower ends of the stay-lines *b* may be spread so as to have the effect of a wider base and a more effective support when working at great elevations.

When it is desired to raise the ladder, the truck is placed in position and the chest D and base F are turned to point the telescopic tubes in the desired directions. The pump is then put in operation, when the water forced into the nest of tubes will cause the inner tubes to slide outward and extend the height of the series until the upper end of the tube *a* is in the desired position opposite the window or other point.

The stays *b* serve effectually to prevent any sagging or swinging of the upper end of the tubes so that they will sustain the strains to which they are subjected.

It will be seen that an apparatus thus constructed may be quickly brought into use; that there are no complex devices to get out of order; that any requisite amount of power may be obtained for elevating the ladder and sustaining its weight without depending on any other mechanism than the pumps and sliding tubes.

It will be apparent that trucks of various forms, and pumps of any desired character, may be used without departing from the main features of my invention.

A hose may be attached to the pipe *a*, or the latter may be used to conduct the water to the desired point, thus affording a supply under circumstances where an ordinary hose would be burned and useless. In such a case it will, of course, be necessary to secure the pipes together before the water is expelled.

I claim—

1. A portable fire-escape consisting of the truck A, its force-pump C, the pivoted chest D, communicating with the pumps, and series of telescopic tubes G, pivoted at the lower end to the side of the chest D, substantially as described.

2. The combination of the truck carrying the force-pump and series of tubes G, its receptacle I, and the rope ladder J, as set forth.

3. The combination of the truck-pump and tubes G, and the drums N, carrying stay-lines, extending to the tubes, substantially as set forth.

4. The combination of the tubes G, stay-lines *b*, and braces *b'*, substantially as herein shown and described.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

JOHN F. GREENE.

Witnesses:
GEORGE LEE,
JAMES S. LAWRENCE.