

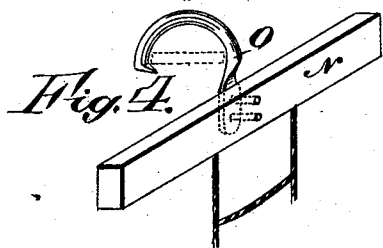
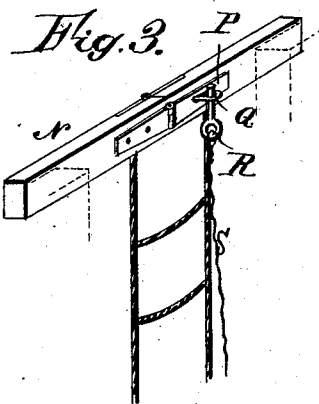
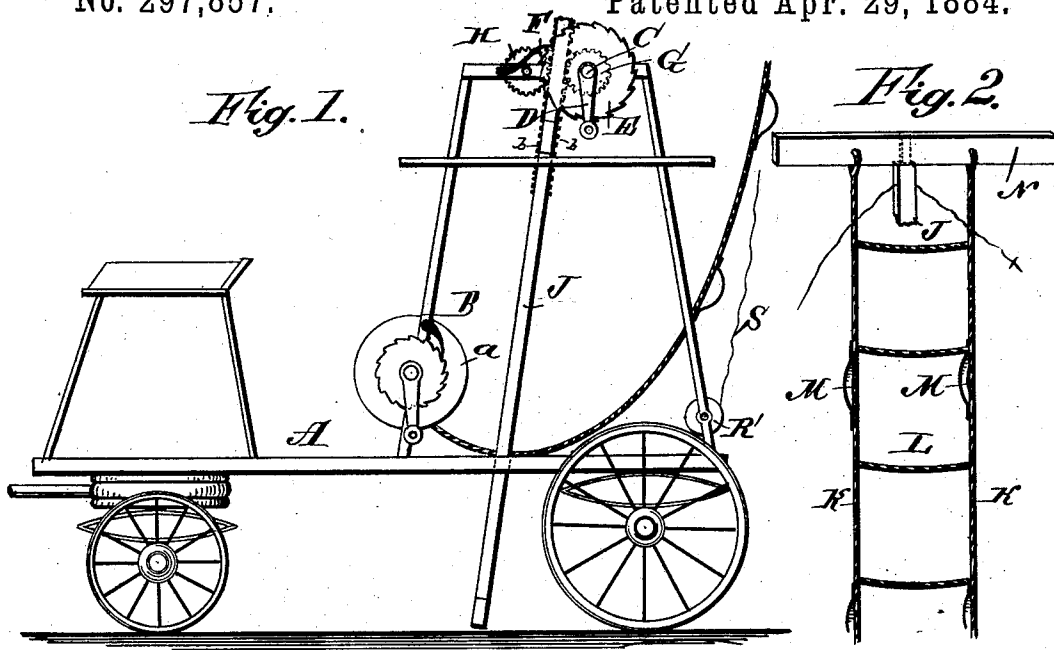
(No Model.)

G. SINFIELD.

FIRE ESCAPE.

No. 297,857.

Patented Apr. 29, 1884.



WITNESSES:

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GEORGE SINFIELD, OF PORTLAND, OREGON.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 297,857, dated April 29, 1884.

Application filed April 6, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE SINFIELD, of Portland, in the county of Multnomah and State of Oregon, have invented a new and Improved Fire-Escape, of which the following is a full, clear, and exact description.

My invention relates to improvements in fire-escapes; and it consists in the peculiar construction and arrangement of the parts, as hereinafter more fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal elevation of my improved truck for raising rope ladders. Fig. 2 is a perspective view of upper end of the rope ladder. Figs. 3 and 4 are perspective views of modifications of the upper end of the said rope ladder.

On the rear end of a truck, A, a frame, B, is mounted, in the upper part of which a shaft, C, is journaled, which is provided on the outer end with a crank-handle, D. On the said shaft C a ratchet-wheel, E, is mounted, against which a spring-pawl, F, rests, for locking the shaft in the desired position. A sprocket or toothed wheel, G, is mounted on the shaft C, and another sprocket or toothed wheel, H, is mounted on a shaft parallel with the shaft C, in such a manner that there will be a certain distance between the wheels G and H. The toothed edges of the wheels G and H are exactly opposite each other, and between the same a pole or rod, J, is passed, which rod is provided with racks *b b* on its opposite sides, adapted to gear with the wheels G and H, which rod J is formed of a series of united sections. The function of the toothed wheel H, gearing with one of the racks on the pole J, is to diminish the friction arising from the pressure of the wheel G on its rack on the pole, which forces the latter (when but one rack and one wheel, G, are employed, and the opposite rack and wheel, H, are dispensed with) against the opposite face of the hole through which the pole passes and causes much friction. This defect is obviated by the employment of a pole with racks on

its opposite side and the toothed wheel H, which latter also serves to hold the rack on the opposite side of the pole always in gear with the toothed wheel G. By turning the crank-handle D the teeth of the wheels G and H will catch on the racks of the pole J, and will raise the same. If a rope ladder is attached to the upper end of the pole J, the said rope ladder can be raised to the desired height. As the pole rises, the additional sections are attached to the lower end of the same. The rope ladder is composed of two side ropes, K, united by cross-ropes L or rungs of metal or wood, which ladder is provided with a series of hand-loops, M, to facilitate ascending or descending the ladder. The upper end of the ladder is attached to a cross-bar, N, which is of such size that when it is passed through a window at an incline it will catch on the edges of the window in a horizontal or transverse position, and thus will support and hold the upper end of the ladder. If desired, the said cross-bar N will be provided with a hook, O, adapted to catch on the window-sill; or it can be made of two parts hinged to each other, the hinge being provided on the under side, and a latch, P, and staple Q on the other side. The latch P is folded down on the side of the bar, and a locking-pin, R, is passed through the staple Q, to hold the two sections forming the bar N extended, as shown in Fig. 3. A cord or rope, S, is attached to the locking-pin R, and passed over a pulley, R', on the frame B.

As stated above, the rope ladder is raised by means of the pole J, and when the cross-bar N reaches the desired window it is pushed through the window-opening, so that the bar N catches on the edges of the window-opening, or the hook O catches on the sill. The cross-bar N is locked in an extended position by means of the bolt Q, and is then raised and forced through the window. If the ladder is to be removed, the pin R is withdrawn, thus permitting the bar N to collapse and to drop from the window, so that it will not be burned up with the building. For steadying the pole, and to assist in giving the stroke to break in a window, guy-ropes will be attached to the upper end of the pole. A drum, *a*, provided

with a ratchet, is provided on the frame-work for winding up the rope ladder and for tightening it up when in use.

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

10 1. The combination, with a rope ladder consisting of the side ropes, K, united by cross ropes or rungs L, of hand-loops M, secured to the side ropes, K, substantially as described, and for the purpose set forth.

15 2. The combination, with the pole J, arranged between the toothed wheels G H, and provided with racks *b b* on its opposite sides, of the cross-bar N, secured to the upper end

of the pole, and a rope ladder, K K L, attached to said cross-bar, substantially as shown and described.

3. The combination, with the pole J, arranged between the toothed wheels G H, and provided with racks *b* on its opposite sides, cross-bar N, formed of two sections hinged together and secured to the upper end of the pole, and a rope ladder secured to said cross-bar, of the slotted latch P, staple Q, and pin 25 R, substantially as shown and described.

GEORGE SINFIELD.

Witnesses:

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