

(No Model.)

2 Sheets—Sheet 1.

J. S. PARMENTER.
FIRE ESCAPE.

No. 285,301.

Patented Sept. 18, 1883.

Fig. 1

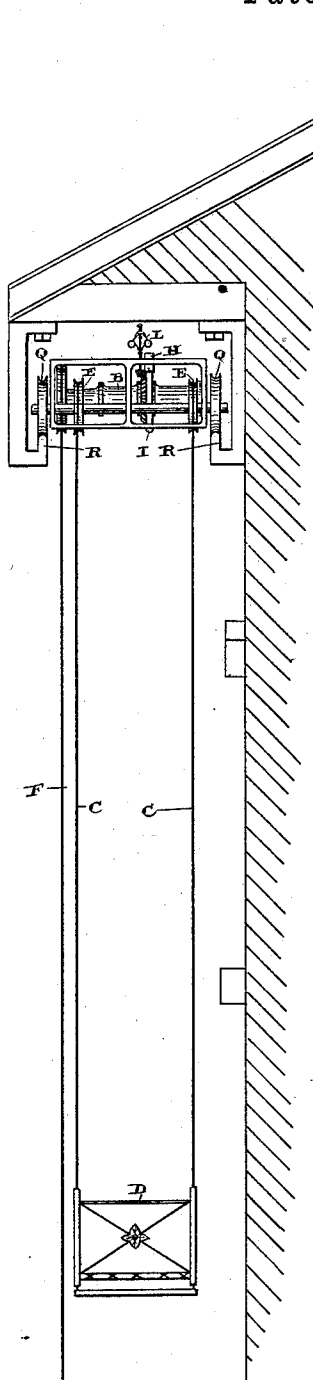
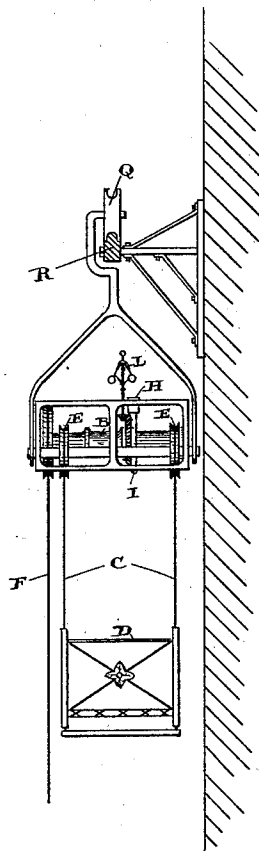


Fig. 2.

Witnesses.

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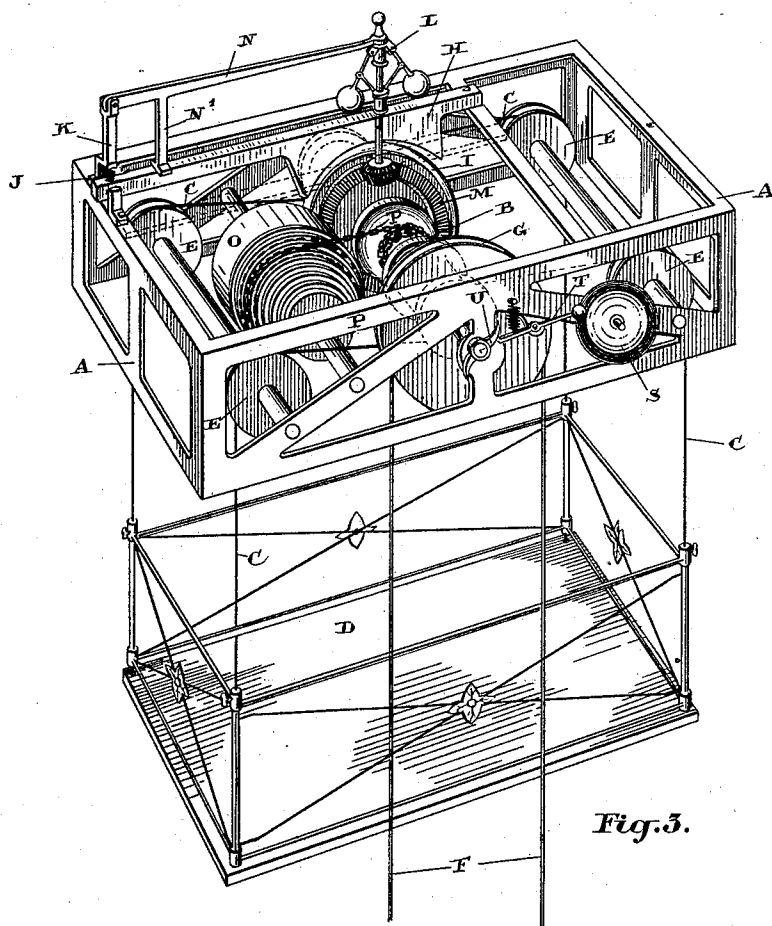


Fig. 3.

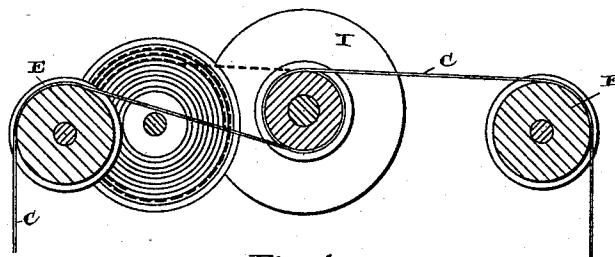


Fig. 4.

Witnesses.

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UNITED STATES PATENT OFFICE.

JAMES S. PARMENTER, OF WOODSTOCK, ONTARIO, CANADA.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 285,301, dated September 18, 1883.

Application filed April 27, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES SPENCER PARMENTER, a subject of the Queen of Great Britain, residing at the town of Woodstock, in the county of Oxford, in the Province of Ontario, Dominion of Canada, have invented a certain new and useful Fire-Escape, of which the following is a specification.

The object of the invention is to provide a cheaply-constructed fire-escape so arranged that it can readily be brought into service either from the exterior of the building or from the interior of any of the rooms, the escape being also arranged so that it can be moved from different points of the building and be used from any window.

It consists, essentially, of a truck provided with wheels or rollers resting upon a rail or rails attached to or near the roof of the building, the said truck having a cage or platform carried by chains or their equivalent suspended from it, the mechanism for connecting the cage or platform to the truck being such that the said cage or truck may be raised or lowered, as required, suspended at any desired point, and allowed to descend as slowly or as quickly as may at the time be required.

Figure 1 is a view of a building, showing my improved fire-escape attached to it. Fig. 2 is a detail showing the manner of attaching the supporting-rails to the roof of the building. Fig. 3 is a perspective detail of the truck and cage. Fig. 4 is a detail showing arrangement of ropes around rollers.

In the drawings like letters of reference indicate corresponding parts in each figure.

As the principal points of my invention are involved in the construction of the truck, it will be better in this specification to first describe in detail the construction of the truck and the mechanism contained within it for supporting the cage or platform.

A is the truck, consisting of a light frame, preferably made of iron, and provided with suitable bearing-boxes for supporting the mechanism by which the cage or platform is suspended.

B is the principal supporting-drum, around which the chains C are wound. These chains, it will be noticed, are connected, respectively, to the four corners of the cage or platform D;

but before descending to these points the chains pass over the grooved pulleys or rollers E, situated one at each corner of the truck, so that each chain falling from the truck shall descend in about a perpendicular line to the corner of the cage D where it is to be attached.

F is an endless rope or chain passing over a grooved pulley or roller, G, which pulley G is keyed or otherwise fastened to the drum B. By pulling on the rope F the pulley G will be caused to revolve and the suspending-chains C will either be wound upon or unwound off the drum B, thereby causing the cage or platform C to ascend toward or descend from it, according to the direction in which the drum is made to revolve. When the weight is placed upon the cage or platform D, it will of course descend, thereby causing the drum B to revolve as the chains unwind off the drum.

In order to regulate the speed of the descending cage, I provide a brake, H, which is arranged to be applied to a friction-pulley, I, keyed or otherwise fastened to the drum B. A spring, J, is placed on the end of the brake H, between it and the bracket K, which is fastened to the truck. This spring should be of sufficient strength to cause the brake H to press upon the friction-pulley I sufficiently to prevent the drum revolving too quickly when carrying an ordinary load.

As the load on the cage will be varied considerably, I provide a governor, L, arranged to be driven by a beveled spur-wheel, M, attached to the side of the pulley I. An arm, N, is attached to the governor, and extends over the brake H, against which the upright N' presses, the arm N being fulcrumed on the bracket K, as shown in the drawings. The governor L is set so that it will not act against the arm N except when the speed of the descending cage has increased beyond the required speed, when the governor acts upon the arm N, and thereby applies the brake, the speed of the descending cage being thus automatically regulated.

With the view of providing a constant power for the support of the cage or platform D, I provide a drum, O, actuated by a clock-spring of sufficient strength to support the ordinary weight of the cage and its chains, the drum O being connected to the drum B by a chain or

rope, P. The power of the spring and the drum O is thereby directed upon the drum B. If desired, the strength of the spring may be increased sufficiently to cause the cage to ascend.

Having described the construction of the truck and its mechanism for supporting the cage, I shall now proceed to explain its connection to the building and the manner of operating it. Q are grooved wheels or rollers properly journaled on suitable spindles attached to the frame A of the truck. These wheels rest upon the rails R, which are either attached to the eave-trough or to the side of the building near that point.

When the fire-escape is not in use, the cage D should be allowed to ascend up close to the truck, which, as I have before stated, is carried on the rails R. These rails are extended all around the house, so that the truck may be moved to any point in the building where the fire-escape may be required. The rope F may be allowed to hang outside of the building, and, if necessary, it may be inclosed in a box accessible to any one, and yet out of sight. This rope, as before explained, is for the purpose of raising or lowering the cage, and a further use for it is that it may be used for pulling the truck along the rails R to any point in the building where the fire-escape is to be used.

When a fire breaks out in any portion of the building and it becomes necessary to use the fire-escape, the rope F may be seized and the truck drawn along the track immediately over the window where the escape is to be used. The rope H can then be manipulated so as to cause the cage to descend opposite to the window. The occupant may then get into the cage, and articles of furniture or of value may also be placed therein, and the cage allowed to descend either by its weight, or it may be assisted, if necessary, by drawing upon the rope F.

From this description, and with the assistance of the accompanying drawings, it will be seen that the cage can be brought before any window in the house, and when those who can escape from this particular window have been landed on the ground the cage may be again hoisted and brought before some other window and the operation repeated.

It will be understood that while the primary object of my invention is to provide a fire-escape, the same apparatus may be employed for elevating building material or raising heavy articles to be placed in the various rooms. It

will also prove a valuable appliance for the use of the firemen in extinguishing a flame, as it can be moved from window to window and the water from the hose directed from it.

As the facility with which the cage can be raised or lowered might enable burglars to utilize the cage for their unlawful purpose, I provide an alarm-bell, so that the cage cannot be raised or lowered without giving notice to every one. This bell will also be useful for alarming the occupants of the house in case it becomes necessary to use the escape.

S is a bell fastened to some convenient point in the truck A.

T is a bell tongue or lever pivoted to the truck A in such a position that the wiper U, which is attached to the drum B, will cause the said tongue to strike against the bell at every revolution of the drum. More than one wiper may of course be used, if desired, to increase the stroke of the bell.

What I claim as my invention is—

1. As an improved fire-escape, a truck provided with wheels or rollers resting upon and supported by a rail or rails attached to or near the roof of the building, in combination with a cage or platform carried by chains or their equivalent passing over rollers journaled in the truck and around a drum similarly journaled, but provided with braking mechanism for checking its revolution, in order to prevent the cage descending too quickly.

2. As an improved fire-escape, a cage or platform suspended by chains or their equivalent from a truck carried on a rail attached to or near the roof of the building, and a drum or roller journaled in the truck and upon which the suspending-chains are wound, in combination with a brake the application of which to the winding-drum is regulated by a governor or operated by the revolution of the drum, substantially as and for the purpose specified.

3. As an improved fire-escape, a cage or platform suspended by chains or their equivalent from a truck carried on a rail attached to or near the roof of the building, and a drum or roller journaled in the truck and upon which the winding-chains are wound, in combination with a drum actuated by a clock-spring and connected to the winding-drum, substantially as and for the purpose specified.

Woodstock, March 30, 1883.

JAS. S. PARMENTER.

Witnesses:

W. M. DOUGLAS,
J. S. MACKAY.