(No Model.)

O. G. LEE.

FIRE ESCAPE.

No. 282,996. Patented Aug. 14, 1883.

Fig. 1.

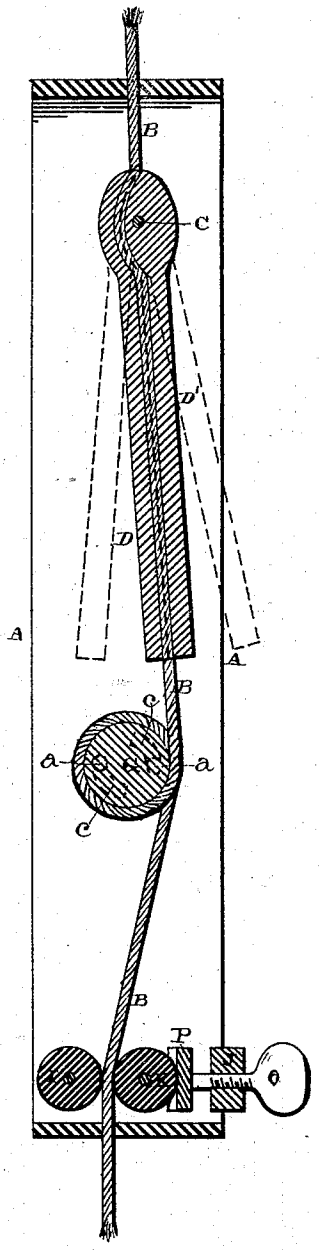

Fig. 2.

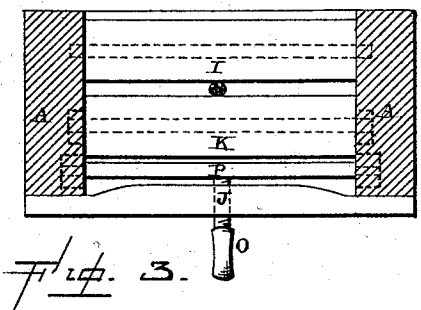

Fig. 3.

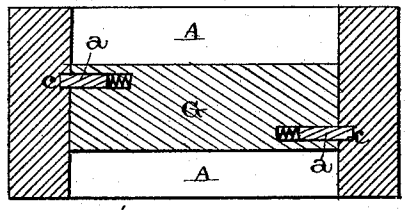

Fig. 4.

Witnesses:
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UNITED STATES PATENT OFFICE.

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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 282,996, dated August 14, 1883.

Application filed February 17, 1883. (No model.)

To all whom it may concern:

Be it known that I, OGDEN G. LEE, of Poughkeepsie, in the county of Dutchess and State of New York, have invented certain new and useful Improvements in Fire-Escapes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in fire-escapes; and it consists, first, in a fire-escape, the combination of a suitable frame and the rope which pass through it, two levers, which are pivoted upon the same rod, the roller, which is free to revolve in one direction but not in the other, suitable rollers, and a set-screw, by means of which the speed at which the rope passes through the frame can be regulated independently of the levers; second, in a fire-escape, the combination of the frame having circular ratchets on its inner sides, the pawls, and rope, whereby the cylinder is allowed to revolve in one direction, but not in the other, as will be more fully described hereinafter.

The object of my invention is to provide a cheap and simple fire-escape, by means of which persons can lower themselves from a burning building with perfect ease and safety.

Figure 1 is a vertical section of my invention complete. Fig. 2 is a vertical horizontal section, taken at right angles to Fig. 1. Fig. 3 is a vertical longitudinal section of the roller. Fig. 4 is a detail view of one of the ratchets, showing its end beveled.

A represents a suitable rectangular frame, which has an opening through both of its ends for the rope B to pass freely through. In the upper part of this frame is the cross bar or rod C, upon which are pivoted the two brake-levers D D′. Each of these levers are grooved on their inner sides, and while one, D, is recessed at its upper end, the other, D′, has a corresponding cam formed thereon, so as to clamp the rope tightly in the recess formed in the other lever. The rope, in passing down between these two levers, can have any desired amount of pressure applied to it by the person who is using the escape, and thus regulate the rapidity with which the descent is made. Below the lower ends of these levers is secured a suitable drum or cylinder, G, around which the rope is made to pass for the purpose of exerting a frictional contact upon the rope, and thus prevent the rope from passing through the frame too rapidly, even if the levers should escape from the hands of the person making the descent.

In one or both ends of the cylinder G are recessed suitable spring-actuated pawls, *a*, which have their ends beveled in one direction, so that the drum will slip idly around, but which ends engage with the circular ratchets *c*, made in the inner side of the frame, when the drum is turned in the opposite direction and stop all motion in that direction. The drum or cylinder G does not revolve while the person is making his descent, for it is intended that this drum should then exert as much frictional contact as possible upon the rope. When, however, the rope is being drawn back for the purpose of making another descent, the cylinder revolves freely, so as to allow the rope to be drawn easily through the frame.

In the lower end of the frame is placed a stationary roller, I, and to one side of it, and in a line therewith, is placed a second roller, K, which moves freely back and forth in a suitable slot made for its journals.

Between the outer side bar, J, through which the set-screw O passes, is passed a sliding plate, P, which bears against the sliding roller, and through which the pressure of the set-screw is transferred to the rope. Either before or after the operator has begun the descent the set-screw can be tightened, so as to exert such a pressure upon the rope that the operator will descend very slowly, or the rollers can be loosened so that the descent can be accelerated as necessity may require. These lower rollers can be made of iron, rubber, or any other material which may be preferred, and the bars in which they are placed, the bearing-plate, and cross-bar will be made of iron, so as to prevent wear and tear. Should the person making the descent lose hold of the levers, by a single turn of the set-screw the sliding roller can be moved up so as to control his

descent. The straps, by means of which the person fastens his or her body to the frame A, are not here shown, but may be attached to the frame on either side. For the purpose of enabling a person on either side to control the levers D D′ equally well, the two levers are hung upon the same pivot C, so that they can be swung toward either side of the frame.

Having thus described my invention, I claim—

1. In a fire-escape, the combination of a suitable frame, the rope B, which passes through it, the levers D D′, pivoted on the same rod, the roller G, which is free to revolve in one direction, but not in the other, suitable rollers, and a set-screw, by means of which the speed at which the rope passes through the frame can be regulated independently of the levers, substantially as shown.

2. In a fire-escape, the combination of the frame A, having the circular ratchets *c* in its inner sides, the pawls *a*, and rope B, whereby the cylinder is allowed to revolve in one direction, but not in the other, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

OGDEN G. LEE.

Witnesses:
CHAS. C. MILLS,
S. K. DARROW.