

(No Model.)

2 Sheets—Sheet 1.

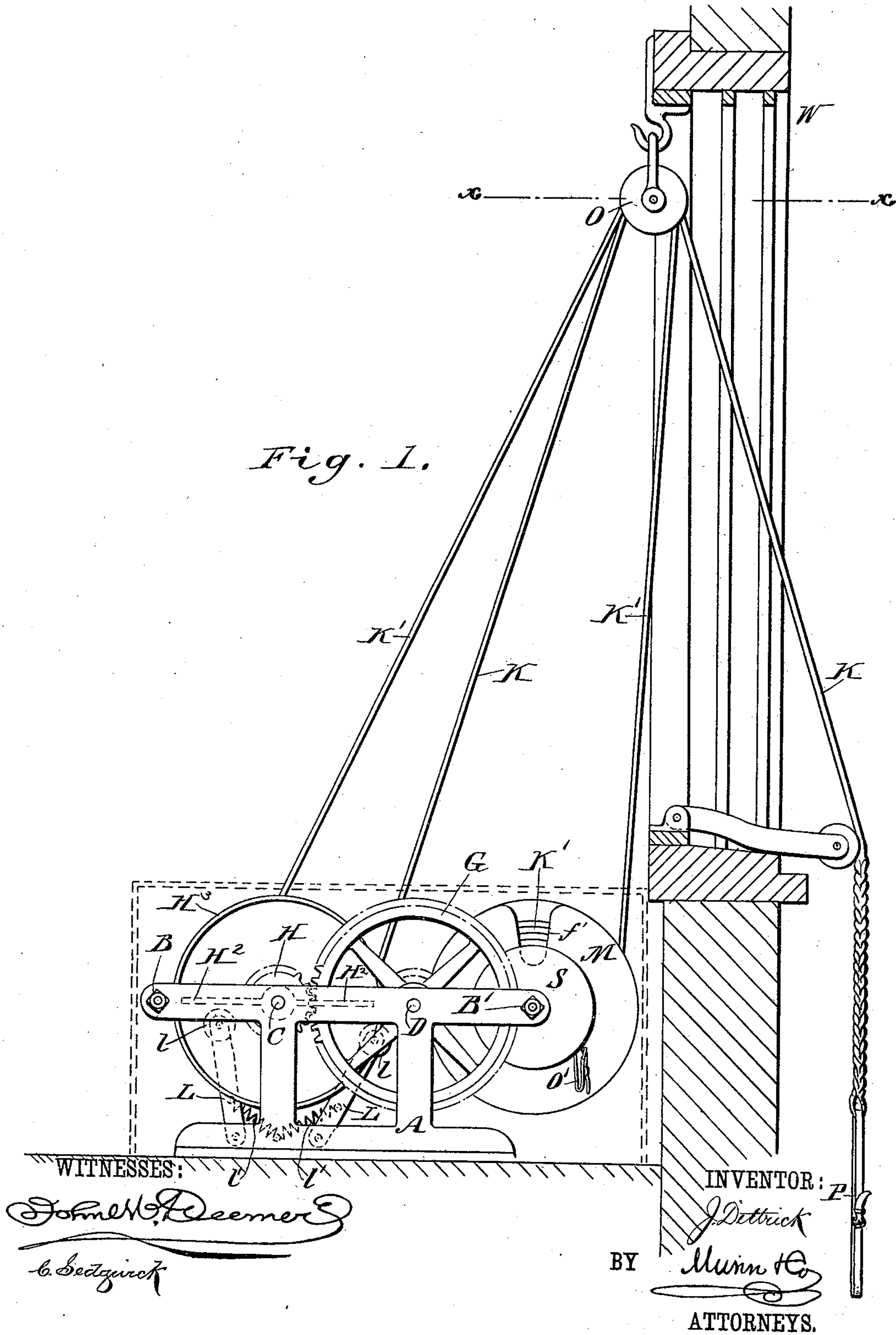
J. DITTRICK.

FIRE ESCAPE.

No. 361,580.

Patented Apr. 19, 1887.

Fig. 1.



(No Model.)

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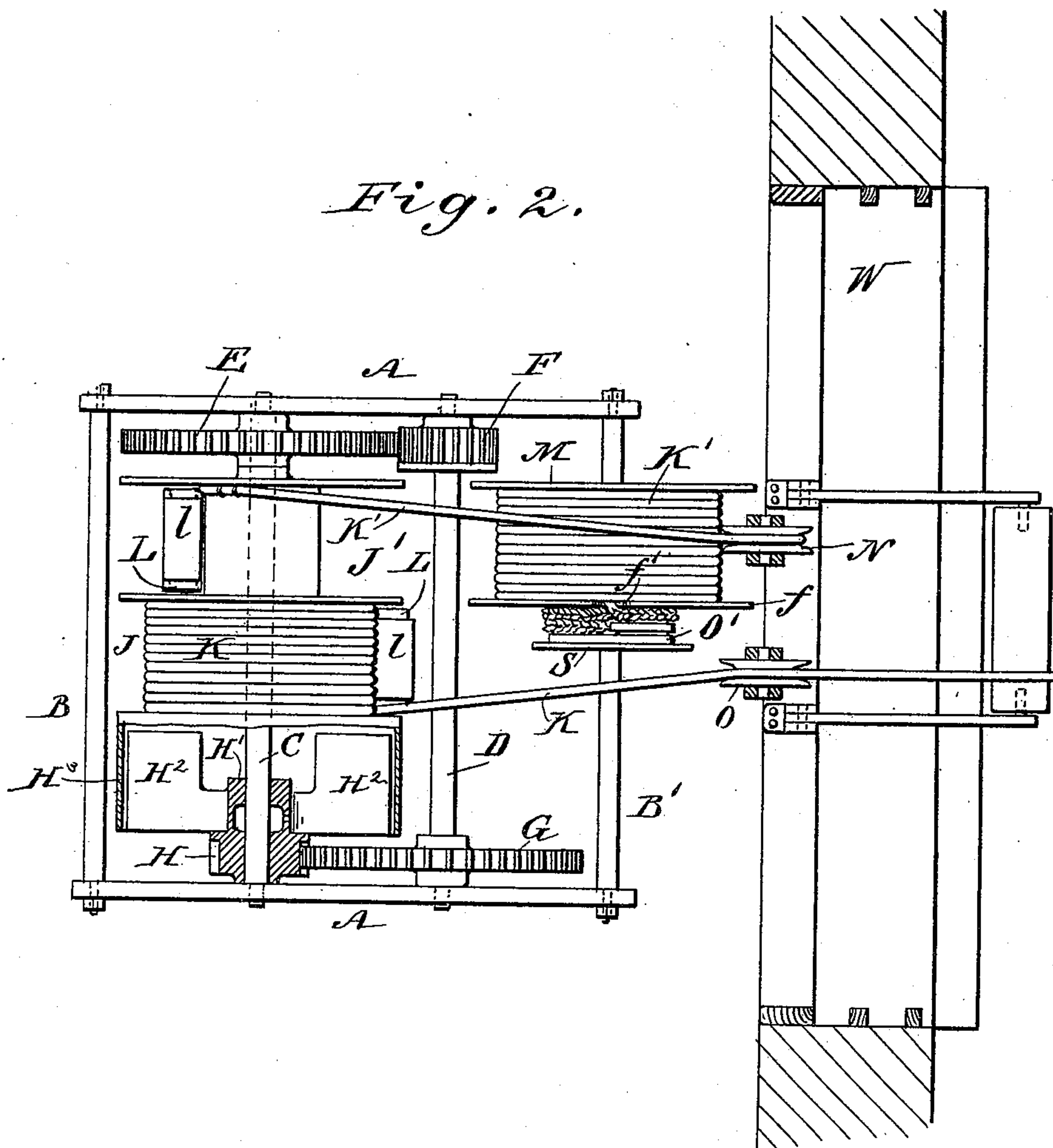
2 Sheets—Sheet 2.

FIRE ESCAPE.

No. 361,580.

Patented Apr. 19, 1887.

Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN DITTRICK, OF PERTH, ONTARIO, CANADA.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 361,580, dated April 19, 1887.

Application filed September 2, 1886. Serial No. 212,447. (No model.)

To all whom it may concern:

Be it known that I, JOHN DITTRICK, of Perth, Lanark county, in the Province of Ontario, Dominion of Canada, have invented a new and Improved Fire-Escape, of which the following is a full, clear, and exact description.

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 both figures.

Figure 1 is a side elevation of my new fire-escape placed in a building near a window-frame, the descending-ropes being both wound upon the drums of the fire-escape; and Fig. 2 is a sectional plan view of the same, taken on the line *xx* of Fig. 1.

The invention will first be described in connection with the drawings, and then pointed out in the claims.

A A represent the two side pieces of the frame of the fire-escape, bolted together by the cross-rods B B'. Journaled in and between the two side pieces, A A, are the two shafts C D. The shaft D is geared to the shaft C by the large cog-wheel E on shaft C and the small cog-wheel F on shaft D, and the latter shaft is provided with the large cog-wheel G, which meshes with the small cog-wheel H, placed loosely upon the shaft C, and attached to a hub, H', on the cog-wheel H are the vanes H² H², which constitute a fan-governor for the fire-escape, the same as in my patent dated September 22, 1885, No. 326,726, and a casing, H³, surrounds the governor, the same as in said patent.

Next to the casing H³ is secured upon the shaft C the drum J, on which one descending-rope, K, is wound, and next to the drum J is another drum, J', on which the other descending-rope, K', is adapted to be wound. The ropes K K' are wound in opposite directions upon their respective drums J J', and each drum is provided with a guide or presser consisting of a hinged arm, L, and roller *l*, for causing the ropes to wind evenly upon the drums, the arms each being held in contact with the drum or rope by a coiled spring, *l'*, attached at one end to the frame of the fire-escape and at the other to the arm, as shown clearly in Fig. 1.

Upon the rod B' is placed, in line with the

drum J', the drum M, on which, when the fire-escape stands in readiness for use, the rope K' is wound, the rope first being passed up over the pulley N, secured at the top of the window-frame W. The rope K passes from the drum J directly over the pulley O, secured at the top of the window-frame, and its end is provided with a belt, P, to be strapped about the person to descend. The end of the rope K' is provided with a similar belt, O', and while this may be wound upon the drum M with the rope K', in order to avoid danger of tangling, I prefer to form at one side of the drum M the small drum S, on which the belt and a portion of the end of the rope may be wound, as shown in Fig. 2. The plate or disk *f*, which separates the drum K' from the small side drum, S, is slotted or cut away, as shown at *f'*, so that the rope K', after the belt O' and a portion of the end of the rope have been wound upon the small drum, may be passed through the said slot *f'* to the drum M, whereon the remainder of the rope is subsequently wound, save that part which reaches from the drum M over pulley N to the drum J', to which the opposite end of the rope is made fast.

In operation, the two descending-ropes being in the position shown in the drawings, the person to descend will buckle the belt P about his waist and leap out of the window. His weight upon the rope will cause shaft C to revolve, which will rapidly revolve the fan-governor, which will retard his descent, so that he will be lowered safely to the ground. The revolution of the shaft C will also wind the rope K' from the drum M upon the drum J', which will bring the rope K' in readiness for the descent of another person. The second person, descending in the same manner, will reverse the revolution of the shaft C and wind the rope K upon the drum J, ready for a third person to descend. The third descending will wind the rope K' again upon the drum J', ready for the fourth person, and so on, each descent serving to set the opposite rope ready for another, so that no time is lost in returning the ropes.

The mechanism of the fire-escape may be inclosed in a suitable case, as indicated in dotted lines in Fig. 1.

Having thus fully described my invention,

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

1. In a fire-escape, the combination, with two drums and two descending-ropes, of a
5 third drum, M, on which one of the ropes may be wound, substantially as described.
2. The combination, with the shaft C, having two drums, of the rod B', drum M, and small drum S, substantially as described.
- 10 3. The shaft C, provided with two drums,

J J', cog-wheel E, and a fan-governor, H², and the shaft D, provided with the cog-wheels F G, in combination with the drum M and the two descending-ropes, substantially as described.

JOHN DITTRICK.

Witnesses:

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