E. K. GRAVES.
Fire-Escape.

No. 200,190. Patented Feb. 12, 1878.

Fig. 1.

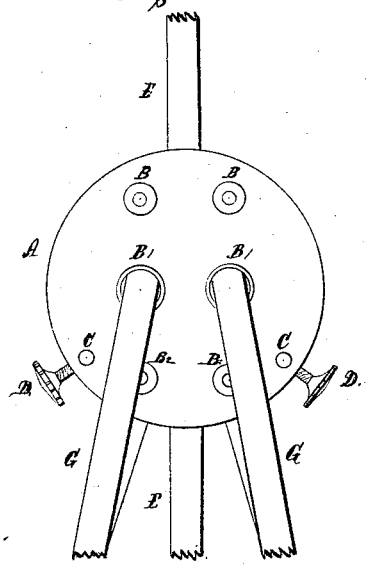


Fig. 2.

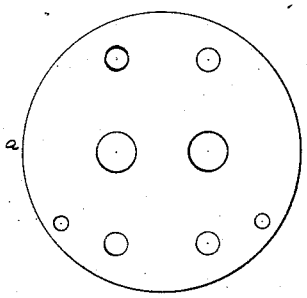
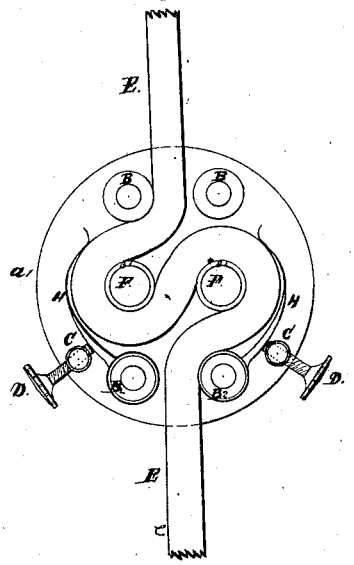


Fig. 3.



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EDWARD K. GRAVES, OF WALTHAM, MASSACHUSETTS.

IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. **200,190**, dated February 12, 1878; application filed July 9, 1877.

To all whom it may concern:

Be it known that I, EDWARD K. GRAVES, of Waltham, State of Massachusetts, have invented a Fire-Escape Device, of which the following is a specification:

The object of my invention is to facilitate the escape of persons from a burning building by the aid of a single rope, which is made to pass over a succession of studs or posts in a frame, as represented in Figures 1 and 3, in such a way as to produce an amount of friction on the rope sufficient to enable the person so escaping to pass gradually, or without undue rapidity, downward on the rope from an upper window or other elevated position to the ground beneath, the amount of friction on the rope being made adjustable at pleasure by means of the springs H H and adjusting-screws D D.

The device is illustrated more in detail in the plan view, Fig. 3, in which the upper plate *a*, Fig. 2, of the frame A is represented as lifted off, and the inner arrangement of the frame A exposed to view. The frame A, as will be seen, is composed of two plates, *a* and *a'*, and the studs or posts B B B_1 B_1 B_2 B_2, the posts B_1 B_1 being pierced longitudinally through their center by a hole sufficiently large to admit the passage of the cords G G, for attaching the sling for supporting the body of the person seeking safety through its use, and the springs H H being attached to the studs or posts B_2 B_2, while the adjusting-screws D D are made to pass transversely through separate posts C C, with their ends pressing against the sides of the springs H H, the inner surfaces of which rest against the rope E E, which is made to pass over and around the studs or posts B B_1 B_1 and B_2, in the manner as shown in Fig. 3.

With the means of adjustment to the weight of the person, consisting of the springs H H, it will be readily seen that by slightly increased tension on the rope below the frame A, by grasping the rope with the hand at *e*, a person may entirely suspend his descent at will; and by passing the cords G G, employed for attaching the frame to the sling that supports the person who is seeking escape, through the holes F F in the studs or posts B_1 B_1, it will be seen that, practically, it will make no difference which way the frame is made to pass over the rope E E, or which end of the rope is upward, and therefore, in case of two or more persons in a room desiring to escape by the same rope, all that will be necessary for the purpose will be, when one person has descended on the rope, for the one remaining above to draw the rope and frame all together up again into the room, reverse the rope end for end, and then descend, as in the first case.

What I claim as my invention is—

The fire-escape device hereinbefore described, composed of the plates *a a'* and posts B B B_1 B_1 B_2 B_2, the springs H H, and adjustable screws D D, in combination with the rope E E and cords G G.

EDWARD K. GRAVES.

Witnesses:

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