

No. 632,993.

Patented Sept. 12, 1899.

E. P. FEIKER.
FIRE ESCAPE.

(Application filed Apr. 7, 1899.)

(No Model.)

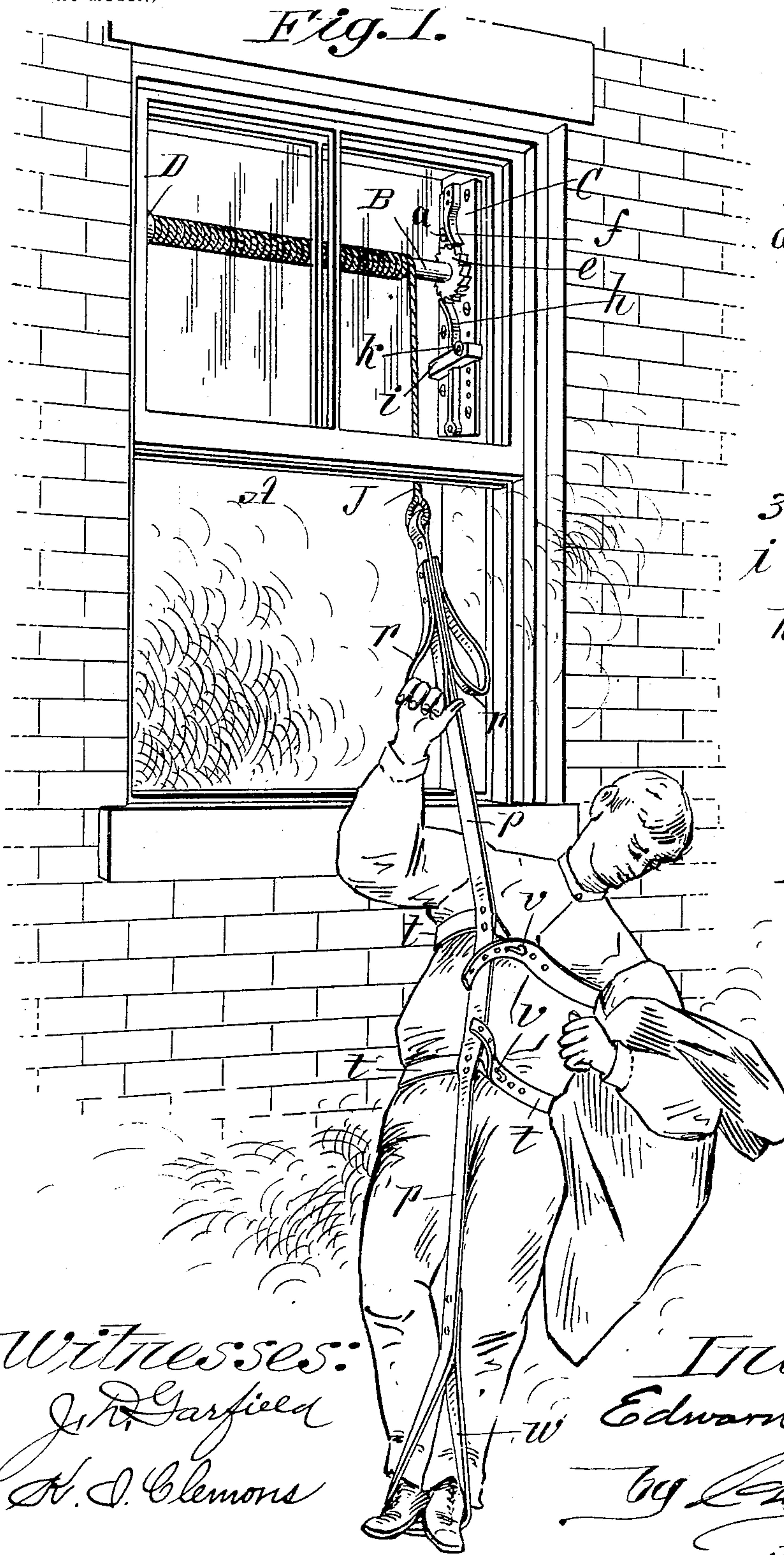


Fig. 2.

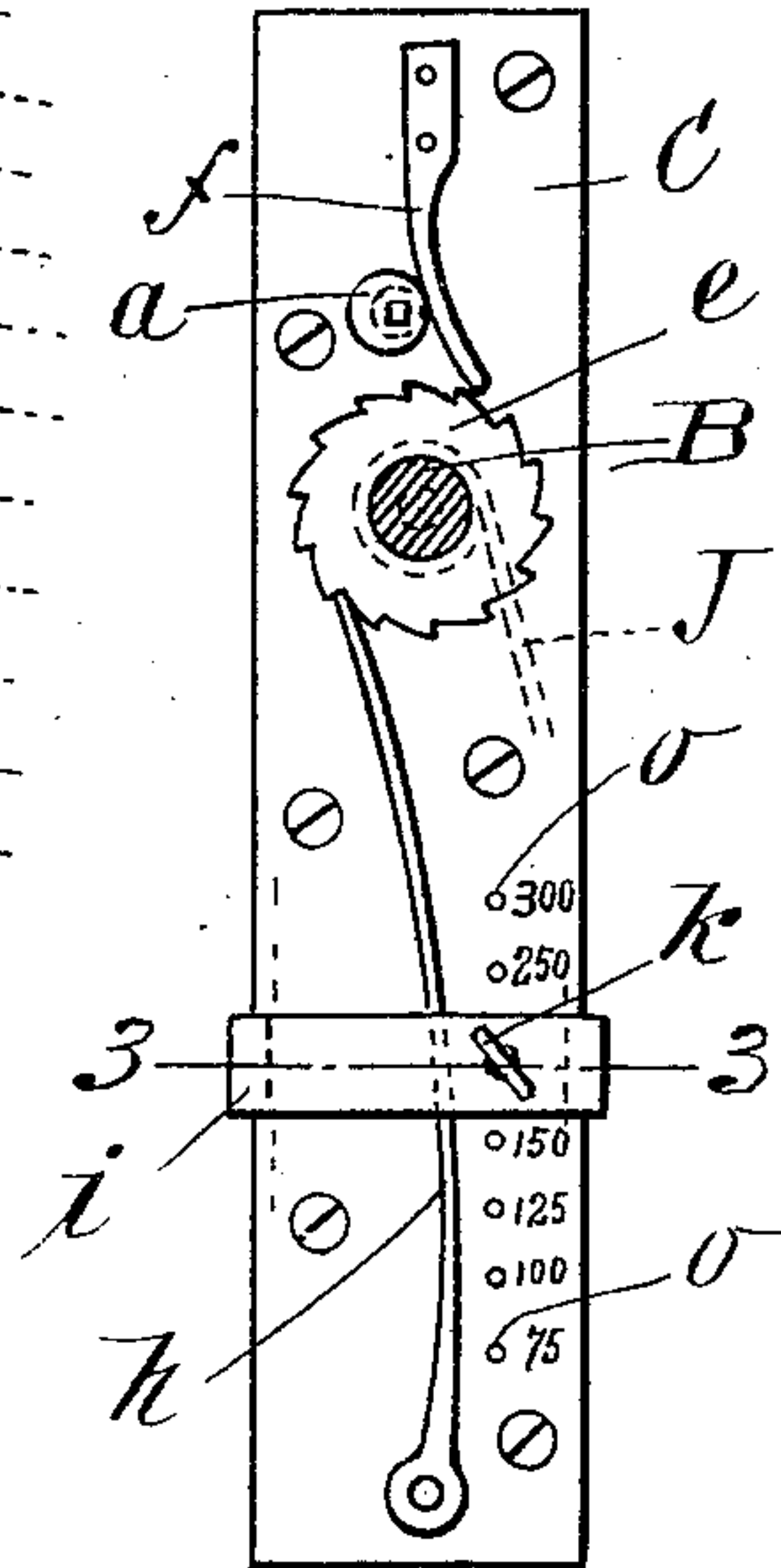
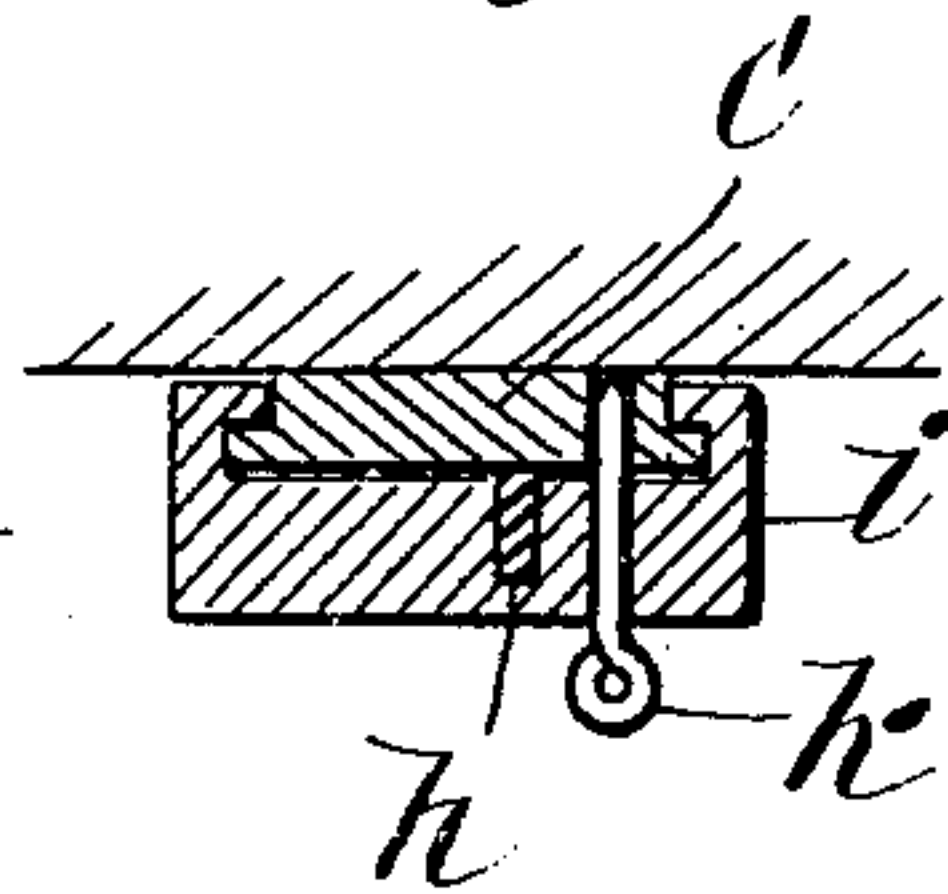


Fig. 3.



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UNITED STATES PATENT OFFICE.

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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 632,993, dated September 12, 1899.

Application filed April 7, 1899. Serial No. 712,120. (No model.)

To all whom it may concern:

Be it known that I, EDWARD P. FEIKER, a citizen of the United States of America, residing at Northampton, in the county of Hampshire and State of Massachusetts, have invented new and useful Improvements in Fire-Escapes, of which the following is a specification.

This invention relates to fire-escapes, and particularly to that class thereof in which the devices are attached to or near a window or door of a room on a building and which are adapted to be operated by an individual to effect his or her escape from said room, in case of fire, through said window or door and by lowering himself to the ground outside of the building, the object being to provide an improved device of this class in which the fire-escape rope or cord or chain by which the person lowers himself, as aforesaid, is wound upon a shaft, combined with improved devices for restraining the speed of rotation of said shaft under a weight hung thereon, whereby the rotation thereof has its speed governed in accordance with the weight of the person using the device, means being provided for adjusting said resistance very quickly to the weight of the person; and the invention consists in the peculiar construction and arrangement of the devices upon which the fire-escape rope or chain is wound and whereby the same is permitted to be unwound under varying weights of the load hanging thereon and in an improved strap-support or harness by which the person is supported on said rope or chain, all as hereinafter fully described, and more particularly pointed out in the claim.

In the drawings forming part of this specification, Figure 1 is a perspective view illustrating a portion of a building and a window or door therein in which are shown fire-escape devices constructed according to my invention, said figure illustrating the manner in which a person using said fire-escape is suspended thereto in the act of escaping from a building. Fig. 2 is a front elevation of a metal plate and devices connected therewith for governing the movement of the chain or rope supporting shaft of the device, said shaft being shown in section in this figure. Fig. 3 is a sectional view on line 3 3, Fig. 2.

Referring to the drawings, A indicates the

window or door frame of a building, across the upper portion of which is supported the rope or chain shaft B of the fire-escape. One end of said shaft has a suitable bearing in a metal plate C, firmly secured against the window-frame by screws, as shown, and the opposite end of said shaft is supported in a suitable bearing D, fixed to the opposite side of said window-frame. On said shaft B adjoining said metal plate C is fixed a ratchet-wheel *e*. On said plate above said ratchet-wheel is secured a spring pawl-lever *f*. Beneath said ratchet-wheel and fixed by its lower end to said plate C is a second spring pawl-lever *h*, both of said pawl-levers having a constant bearing against the periphery of said ratchet-wheel *e*, the said lever *f* with a constant force and the said lever *h* with a force which is variable by the following means: A slide *i* is fitted for adjustment up and down on said plate C and is secured in a position to which it may be moved by a pin *k* entering holes *o* in said plate C. The said slide *i* has a slot therein, through which said spring pawl-lever *h* (see Fig. 3) extends, to the end that by moving said slide upward or downward on the plate C the end of said lever which bears upon the periphery of the ratchet-wheel *e* is made to bear with more or less force, whereby the rotation of said ratchet-wheel is retarded or made more free, according to the weight that may be suspended upon the shaft B, on which said ratchet-wheel is fixed. On the face of said plate C are figures indicating from seventy-five to three hundred, said figures being intended to illustrate the manner of adjusting said slide for more or less pressure upon said lever *h*, according to the weight of the person who may wish to use the fire-escape, so that persons of different weights may be lowered to the ground at a proper or convenient speed.

The support or harness which a person who may wish to use said devices puts on is illustrated in Fig. 1, and consists of a main strap *p*, secured by its upper end to said rope or chain, (indicated by J.) On said strap *p* are two hand-loops *r r*, and two body-inclosing straps *t* are secured by one end to said strap *p*, whereby they may be passed around the body of a person and have their free ends quickly engaged with hooks *v*, secured on the

opposite ends of said straps *t*, one of the latter being passed around the body of the person under the arms and the other at the waist, and a loop *w* is formed at the lower end of said main strap *p*, in which the person places his feet, and grasping one of said loops *r* by one hand supports himself thereon, leaving the other hand free to carry any article that may be desired therewith. The person having said strap attached thereto as described may then emerge from said window, as illustrated in Fig. 1, after having adjusted the slide *i* so that the said lever *h* will bear against the periphery of said ratchet-wheel *e* with a force proportionate to the weight of the person, and then descend under the restraining action of said two pawls gradually to the ground. When it becomes necessary to rewind the rope or chain *J* onto the shaft *B*, the pawl *h* is freed from the ratchet-wheel *e* by moving said slide *i* downward on the said plate *C*, and the pawl *f* has its free end moved away from the periphery of said ratchet-wheel by turning the cam *a* against the side of said last-named pawl, whereby that one also is disengaged from said ratchet-

wheel. Thus the shaft *B* may be turned by the hand to rewind the rope or chain thereon.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

A fire-escape of the class described comprising a revoluble shaft extending between the oppositesides of a window-frame of a building, a rope or chain attached by one end to said shaft and normally wound around the same, a ratchet-wheel fixed on one end of said shaft, a shaft and pawl-supporting plate having weight-indicating figures thereon, secured on said frame at one end of said shaft, a pawl *C* fixed on said plate and engaging said ratchet-wheel with a constant pressure, the spring-pawl *h*, the adjustable slide *i* engaging said last-named pawl, and means for holding said slide in different positions on said plate between the extremities thereof, substantially as described.

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