(No Model.)

F. W. VOIGT.

FIRE ESCAPE.

No. 291,245. Patented Jan. 1, 1884.

Fig. 1

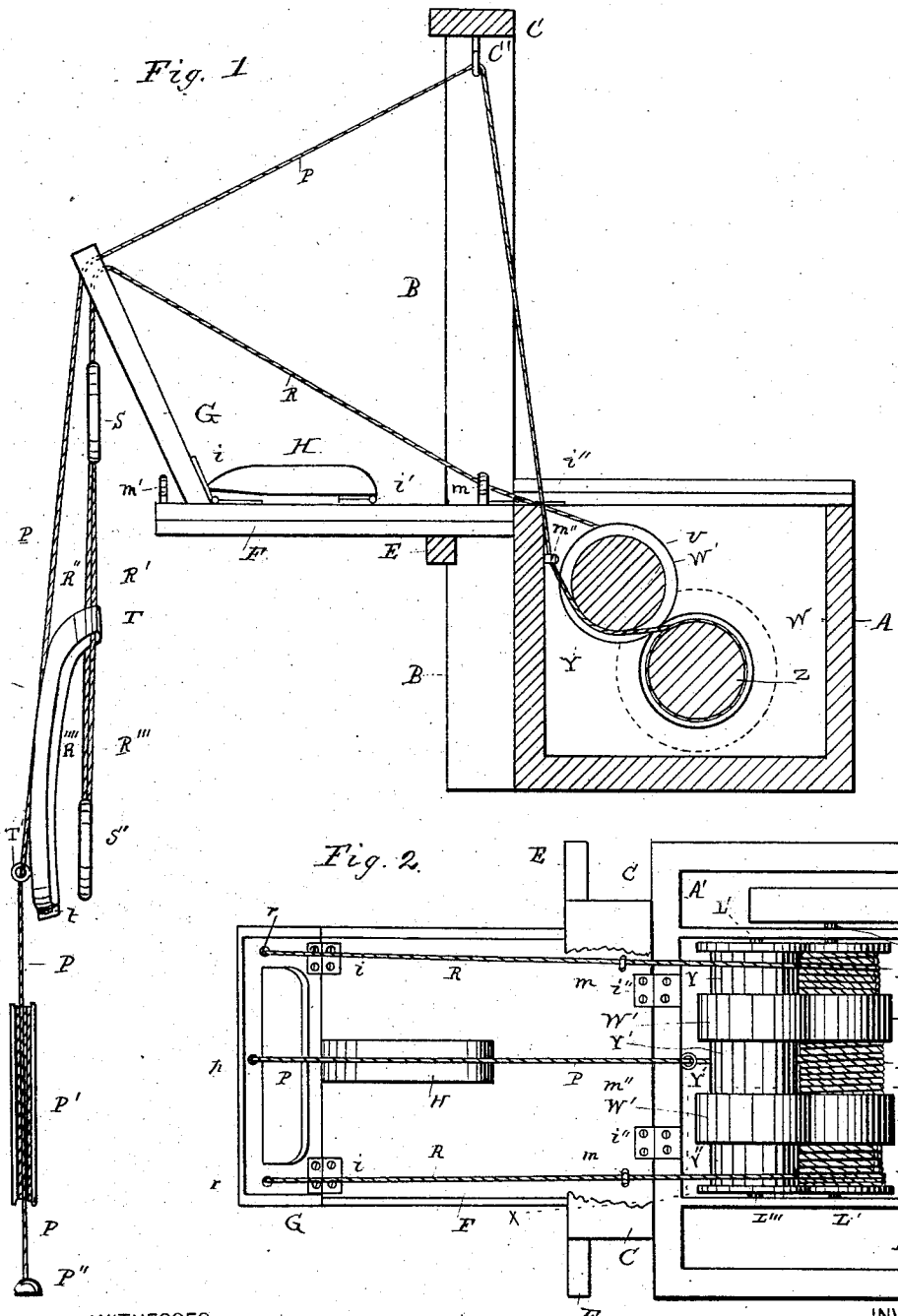


Fig. 2.

WITNESSES

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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 291,245, dated January 1, 1884.

Application filed May 19, 1883. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK W. VOIGT, a citizen of the United States, residing at Hicksville, in the county of Defiance and State of Ohio, 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 appertains to make and use the same.

This invention relates to improvements in fire-escapes; and has for its object to enable the occupants of buildings to escape therefrom in the event of fire. This object is attained by the mechanism illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a sectional view taken on the line *x x* of Fig. 2. Fig. 2 is a plan.

The letter A indicates a box having a cover, F F, hinged at *i''*; also, a gallows-frame, B C, attached to the rear of the box, and rolls W W′ in the interior. The cover F, when open, is intended to rest upon the window-sill of the building, in which it may be located. A frame, G, is hinged to the cover F by hinges *i*, and when placed in an elevated position, as shown in Fig. 1, it is held by the brace H, which is hinged to the cover F by hinges *i′*. A piece, E, extends across from one upright to the other of the gallows-frame B C, and serves as an additional support to the cover F when open. The box A is divided into three parts, A A′ A″, by transverse partitions *a a′*. In part A′ is located a drum, D, containing a volute spring secured to the shaft L, so as to cause it to revolve upon its axis, for a purpose hereinafter described. In the central chamber of the box A are rolls W W′, having shafts L L′ L″ L‴, which revolve in bearings in the partitions *a a′*. In each of these rolls there are three recesses, Y Y′ Y″, and Z, upon which are wound the ropes R P in opposite directions. Thus, when the ropes R are unwound, the rope P is rewound. The ends of the ropes R are securely fastened to two rings, S, then passed through the apertures *r* of the frame G, thence through the eyebolts *m*, then over the top of roller Y Y″, thence under the roller Z, to which they are secured. From the rings S extend ropes R′ R″, which are securely attached to the belt T, and then are carried down (as ropes R‴ R⁗) to two rings, S′, to which they are securely fastened. The rope P has secured to its outer end a button, P″. It is then wound upon a reel, P′, or formed into a coil, so that it may readily be lowered to the ground, and should be of sufficient length to permit its being carried to the other side of the street or to adjacent buildings. The upper end of the rope P is carried through a ring, T′, attached to the belt T, thence through an aperture, *h*, in the frame G, then through hook C′ and an eyebolt, *m″*, thence under the roll Y′, and over the top of roll Z, to which it is secured in any suitable manner, the roll Z performing the part of a windlass.

The rope P is intended as a guide-rope, and is to be thrown by the person in the burning building to any one in the street below, who is to carry the end P″ in any direction to prevent the person occupying the escape from being carried into the flames below, the ring T′ serving the purpose to direct the course of descent. The rings S are for the introduction of the arms, the rings S′ for the legs, and the belt T is to be buckled around the body by the buckle *t*, while the hands may grasp the rope P and aid in lowering the occupant. The volute spring in the case or drum D acts as a counterpoise to the weight of the occupant of the escape, as well as to draw the escape back again, to be used by others in the building. As the action of the ropes R in descending is to wind the spring, it is obvious that the greater the height of the building the greater the resistance to the descending body the nearer it reaches the ground, and this I consider a very important feature of my invention.

The rolls W W′ are covered with sand-paper where their two surfaces come into contact.

A shield may be made of leather, and be buckled to the body of the occupant of the fire-escape as additional protection to the person from the flames or any projecting portions of the building.

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

1. In a fire-escape, the combination of the

box A, having rolls W W', adapted to carry ropes R R and P, with rings S S, belt T, and ring *t*, substantially as described, and for the purposes set forth.

2. In a fire-escape, the combination of box A, gallows-frame B C, cover F, frame G, and brace H, with ropes R R, rings S S, belt T, having ring *t*, and guide-rope P, adapted to be raised and lowered by windlass Z, as described, and for the purposes set forth.

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

FREDERICK WILLIAM VOIGT.

Witnesses:

M. B. EVERIST,

A. A. HUBER.