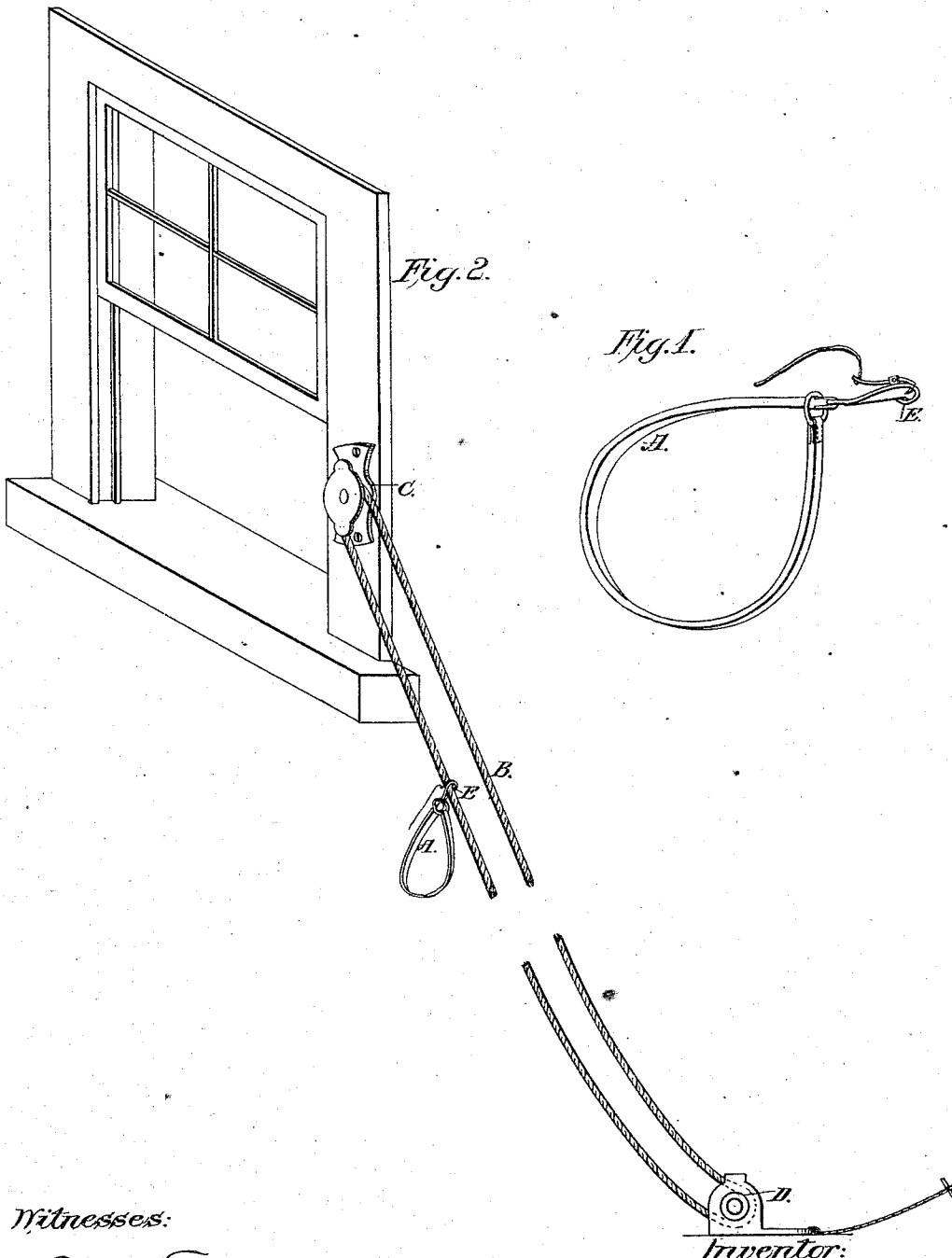


J. B. GATHRIGHT.
Fire-Escapes.

No. 157,912.

Patented Dec. 22, 1874.



Witnesses:

R. M. Dennis
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UNITED STATES PATENT OFFICE.

JOSIAH B. GATHRIGHT, OF LOUISVILLE, KENTUCKY.

IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. **157,912**, dated December 22, 1874; application filed October 21, 1874.

To all whom it may concern :

Be it known that I, JOSIAH B. GATHRIGHT, of the city of Louisville, county of Jefferson and State of Kentucky, have invented a new and useful Fire-Escape; and I hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, which form a part of this specification.

A simple and cheap, but effective, means of escaping from the upper portion of burning buildings is a great desideratum, and the object of my invention is to supply that want.

It consists in providing an endless rope working about two pulleys, one above secured to or near a window, and the other held at or near the ground, (as more fully explained hereafter), and a belt to loop about the body, having a clasp on one end, by means of which persons, after looping the belt about the body, may attach themselves securely to the descending side of the rope. A suitable brake is attached to the lower pulley to assist in stopping and regulating the motion of the rope. The upper pulley is to be secured near an upper window or other opening, and the rear side of the pulley-frame projects beyond the pulley, and is provided with holes, by means of which the frame may be securely bolted to the window-frame or to the wall. The other side of the pulley-frame is connected with the first below the pulley and supports one end of the pulley-axle. It projects up above the pulley, but is not connected across to the rear side of the frame above the pulley, this being left open so that the endless rope may be easily thrown over the pulley. It projects above the pulley to prevent the rope from slipping off the pulley.

As the rope may sometimes be held in a different direction from the motion of the pulley, it will work more easily if the outer edges of the pulley-frame be provided with long rollers, around which the change of direction may be made without causing any great friction. The lower pulley is pivoted in a frame, which keeps the pulley clear of the ground, when it is held with the axle horizontal, and is regulated in its motion by a screw-brake. This brake may be applied in the form of a screw-tap, working upon a thread cut on one

end of the pulley axis, the end being left free for this purpose, thus allowing the tap to be screwed up against the pulley and regulate its motion at the pleasure of the operator..

This screw-brake may be made to operate upon the rope instead of the pulley, or upon both, but either is deemed sufficient, as there will always be persons on the ground who can assist in regulating the motion of the rope by taking hold of it. The lower pulley-frame has a cord attached to facilitate stretching the endless rope, and holding it at proper tension and in the desired position or direction.

The belts may be of any material strong enough to sustain the weight of a person, and terminate at one end in a ring or loop and at the other in a snap or clasp hook, which hook is so constructed or provided that it will not slide on the rope. This last may be effected by a small lever pivoted on the back of the clasp, with a sharp point or "bill" on one end projecting at right angles through a hole in the back of the snap at the point where the rope works, and into the rope, a spring under the other end of the lever causing this point to press against and into the rope sufficiently to hang it. A cord is attached to the other end of this lever, and by pulling this the point may be withdrawn from the rope, when the clasp will then slide upon the rope. This provision is merely precautionary, and is intended to enable a person to slide down the rope in case the rope should cease to run, from any cause, while the person is upon it.

Owing to the simplicity of my invention, however, such an exigency is barely possible. I would therefore, in most cases, prefer simple clasps with graduated openings that will tighten upon the rope with the weight upon it, so as not to slip to any considerable extent. The two ends of the rope should be securely and smoothly united, so that they will pass freely and smoothly around the pulleys.

The rope may be steeped in any known solution that will render it less liable to burn without seriously affecting its flexibility.

The working of my invention is now obvious. The upper pulley is secured to or near the window-frame, so that the rope, when upon it, will be within easy reach from the window,

and this pulley and frame should remain a fixture there. The other pulley with the endless rope of sufficient length upon it should be kept inside, together with one or more of the belts. To escape upon it a person has only to loop the rope over the fixed pulley, and drop the other pulley to the ground, the rope of course being still around it. Persons below catch the lower end and, carrying it to a slant in the desired direction, secure or firmly hold it there. Then looping a belt about the body the escaping person attaches himself by the clasp to the rope and descends with it at a rate of speed regulated by those below, as heretofore explained. A woman sick or faint and helpless, or an infant, may be looped in a belt, clasped to the rope, and descend in perfect safety. Belts may be re-

turned to those above by clasping them onto the descending side of the rope. And in the same way firemen may ascend to the top stories of buildings to assist in rescuing the inmates.

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

The belt A, provided with the clasping-hook E, in combination with the endless line B and pulleys C and D, substantially as and for the purpose herein shown and described.

Signed this 15th day of October, 1874.

JOSIAH B. GATHRIGHT.

Witnesses:

R. M. DENNIS,

J. E. McGRATH.