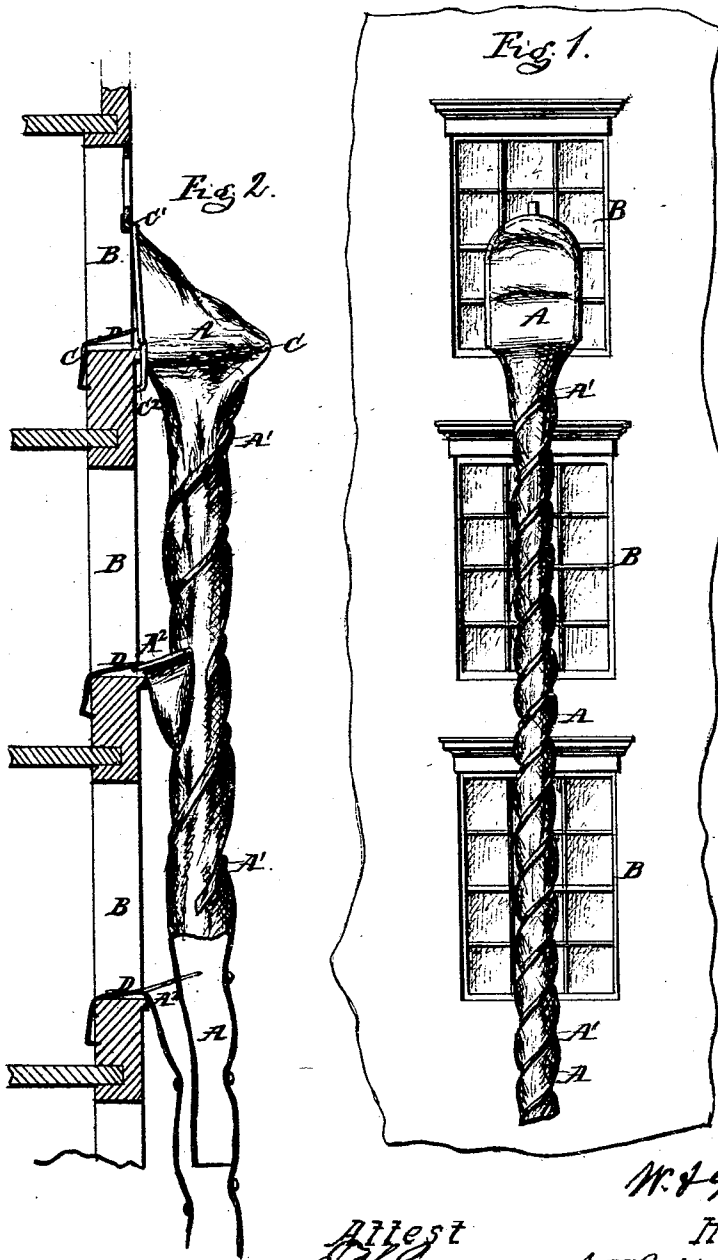


W. & G. H. Burditt,

Fire Escape.

No. 99,399.

Patented Feb. 1. 1870.



Attest
J. H. Maguire
A. Rappert.

W. & G. H. Burditt

Inventor
J. P. Holloway & Co.
Atty.

United States Patent Office.

WILLIAM BURDITT AND GEORGE H. BURDITT, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 99,399, dated February 1, 1870.

IMPROVED FIRE-ESCAPE.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that we, WILLIAM BURDITT and GEORGE H. BURDITT, both of Boston, in the county of Suffolk, and State of Massachusetts, have invented an Improvement in Fire-Escapes; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a front elevation of our improved device as it appears when in position for use.

Figure 2 is a vertical side elevation, showing the entrance-apertures from the different stories of the building to which it is attached, and also the means of attaching it to the windows of a building.

This invention relates to that class of devices which are denominated fire-escapes, the object of which is to afford ready means of escape from burning buildings, or from buildings where the usual avenues of escape have been cut off by any other means; and to this end,

It consists—

First, in providing a tube or pipe of canvas, or other suitable material, and of the proper dimensions, which tube or pipe is reduced in such diameter by folding or gathering, and by being surrounded by a spiral elastic or yielding band, as a consequence of which, persons, in descending through it, can regulate their descent; and

Secondly, in the arrangement of the entrance-apertures with reference to the tube; and

Thirdly, in the combination and arrangement of the devices for securing it to the window, as will be more fully described hereinafter.

A, in the drawings, represents a tube or pipe, which may be made of canvas, or any other strong cloth, or it may be of India rubber, or of any suitable flexible material, it being sewed or otherwise formed into a tube of the required size, say eighteen or twenty inches in diameter, when extended.

The upper end of this tube is to be provided with a hood, or entrance-aperture, through which a person may enter, when it is in the proper position for such person to escape through, as shown in fig. 2 of the drawings. At such points below the above-referred-to entrance-aperture as will bring them opposite the windows of the stories below, there may be formed other entrance-apertures, as shown in the same figure, so that the same device may afford the means of escape to persons in any of the rooms below the upper story, the windows of which are in line with the one to which it is secured. These last-mentioned apertures are designated A² in the figure referred to. An important feature in this tube consists in extending that portion thereof which is above each of the apertures A², down

past such apertures, so that a person descending from any of the upper rooms may not be liable to become entangled with or in such apertures, they being conducted past them by such extended portions.

A¹ represents an elastic band, which is to be secured to the upper portion of the tube, just below the hood or entrance-aperture, from which point it is to extend spirally around the same to its lower end. This band may be made of India rubber, or of any other elastic substance. An equivalent means of giving the required elasticity to the tube, would consist of a goring or strip of elastic material, inserted into the tube; or metallic bands could be used, not united at their ends, which form of construction would permit them to open sufficiently to permit the person to pass through. In applying this elastic material, the tube is to be contracted to about one-half of its diameter, so that any person, in descending through it, may regulate the velocity of his descent, by simply extending his elbows, so as to cause them to come in contact with the tube at the points where the elastic material encircles it. The same result may be produced by bending the body, or by extending the knees, in such a manner as to cause them to rest upon the encircling elastic bands or hoops, by the doing of which the descent may be regulated, or the person may stop his descent altogether at any desired point, the bands being secured to the tube at proper intervals along its surface for that purpose.

B B B represent the windows of a building, to which the escape is shown as attached, the lower end of which, when in position, should be some two or three feet from the earth or sidewalk.

C represents a frame, of metal, which is to be secured to the lower portion of the upper hood or entrance-aperture, in such a manner as to keep it extended, so that a person can easily enter it. The inner ends of this frame are to be bent downward, at a right angle to the body of the same, as shown in fig. 2, such projecting parts being pointed, so as to enable them to take hold of the window-sill, or they may hook over such sill.

C¹ represents a bow or frame of metal, which is hinged to frame C, at or near the point where it comes in contact with the window-sill or wall of the building. To this bow or frame, the upper portion of the hood is attached, in such a manner, that when it is in the position shown in the drawings, the entrance-aperture is always kept open. Upon the top of this bow, there is an inwardly-projecting piece of metal, which extends in that direction for a distance equal to or a little more than the thickness of the window-sash, when it is turned upward, so as to form a hook, which, when the escape is in position for use, the lower portion of the sash may be allowed to rest upon; the bow C¹ and

its hook will prevent its being displaced by the person descending through such escape.

C² represents an arm, of which there to be two, one secured to each portion of the frame C, in such a position as to bear against the wall of the building below the entrance-aperture, and thus form an additional support for the escape.

D represents an elastic rope or cord, which it to be attached to the bow C', upon each of its arms, and is to be provided, at its outer end, with a metallic hook. The office of this fastening is to give additional security to the escape, by carrying the elastic rope over the window-sill, and passing the hook over its inner lower edge, and causing it to bear upon its under surface, so that if any of the other fastenings should give way, this would remain, and thus prevent the falling of the escape. To each of the entrance-apertures below the upper one, or to the frames surrounding their mouths, there is to be attached one of these elastic ropes and a hook, so as to prevent the swinging of the tubes while the person is descending. Instead of the elastic rope, above described, a non-elastic rope or chain may be used, which will answer a good purpose.

Having thus described our invention,

What we claim, and desire to secure by Letters Patent, is—

1. A fire-escape, consisting of a tube of canvas, or other flexible material, of sufficient diameter to permit of the passage of a person through it, but which is reduced in such diameter by folding or gathering, and by being surrounding by a spiral, elastic, or yielding band, as a consequence of which, persons, in descending through it, can regulate their descent, substantially as and for the purpose set forth.

2. The entrance-apertures A², substantially as and for the purpose set forth.

3. The arrangement of the main tube of the escape, with reference to the entrance-apertures A², substantially as and for the purpose set forth.

4. The elastic supports D, in combination with the entrance-apertures, substantially as and for the purpose set forth.

5. The arrangement of the frame C, bow C', supports C², and hood or tube A, substantially as and for the purpose set forth.

In testimony whereof, we have signed our names to this specification in the presence of two subscribing witnesses.

WILLIAM BURDITT.
GEORGE H. BURDITT.

Witnesses:

FREEMAN BAKER,
A. WM. HESS.