No. 672,623. Patented Apr. 23, 1901.

J. JENNINGS.

FIRE ESCAPE.

(Application filed June 13, 1900.)

(No Model.)

Fig. 1.

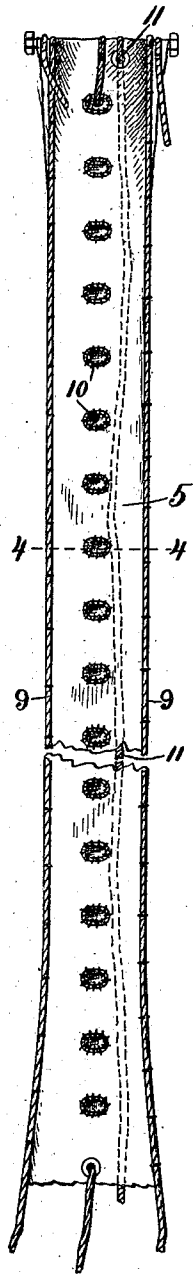


Fig. 3.

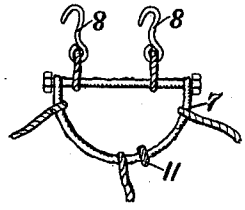


Fig. 4.

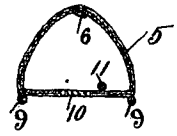
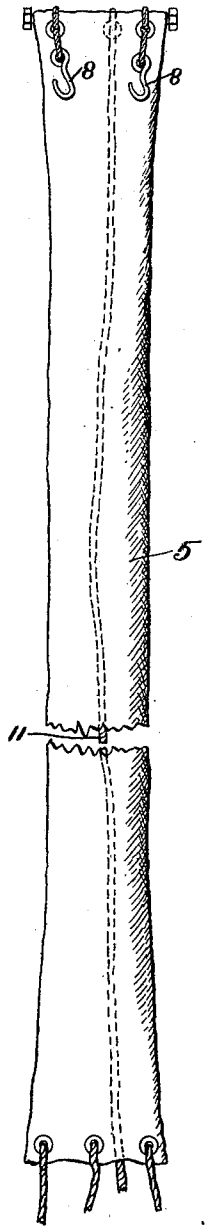


Fig. 2.



WITNESSES

J. S. Cadel.

Robert F. Mark

INVENTOR

Joseph Jennings

by

Garry P. Van Wyck

ATTY

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOSEPH JENNINGS, OF LIBERTY, NEW YORK.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 672,623, dated April 23, 1901.

Application filed June 13, 1900. Serial No. 20,158. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH JENNINGS, a citizen of the United States, residing at Liberty, in the county of Sullivan and State of New York, have invented a new and useful Fire-Escape, of which the following is a specification.

My invention relates to apparatus for saving life either in the case of fire on land or disaster at sea, and has for one object to provide a flexible chute in which there will be no danger of smothering if any one should become lodged therein, a second object being to provide a chute of this kind which can be used as a ladder, if so desired, either for the purpose of lowering oneself through the chute in a gradual manner or of climbing up or down the chute on the outside, a third object being to provide a chute of this kind which will not become twisted when in use, and a fourth object being to provide a chute of this kind with a life-line which can be used for lowering children through the chute and also for a stay in place of the air-vents forming the ladder should a person prefer to lower himself by means of the rope, and thereby make the descent more gradual. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front view of the improved chute as it would appear in use under certain conditions. Fig. 2 is a rear view thereof. Fig. 3 is a top end view, part of the ropes being in section; and Fig. 4 is a transverse view on the line 4 4 of Fig. 1.

In the accompanying drawings similar numerals of reference refer to like parts in each of the views, and in the practice of my invention I provide a long flexible chute 5, which is preferably made of canvas and, if for use in case of fire, should be covered with non-inflammable material, such as asbestos, as shown at 6 in Fig. 4.

At the upper end of the chute I mount a D-shaped hoop 7, the form of which is clearly shown in Fig. 3, and this hoop is so disposed that the straight part will be next to the wall or at the rear side of the chute, and two hooks 8 8 are connected with the said straight side, so that the chute may be secured to a window-sill or other support. The flexible chute is secured to the hoop 7, so that the top of the chute is always open, the said chute being of the same size in cross-section as the hoop and being secured to the hoop by passing the flexible chute up through the hoop and returning it over the hoop and securing it below the same in a manner well known.

On the front of the chute I mount two ropes 9 9, which are so mounted that there will be less of the chute between them measuring across the front than there will be measuring around the back, so that when the ropes 9 are stretched in use a cross-section of the chute will be substantially D-shaped, as shown in Fig. 4, but reversed to that of the hoop; as the straight part will be in front. In the said front part of the chute 5, between the ropes 9, I form a plurality of air or ventilation holes 10, which are preferably oblong in form and extend transversely of the chute, and the distance between these ventilation-holes is preferably about the same as the distance between the rungs of a ladder, so that a person could ascend the chute by using these holes the same as the rungs of a ladder or could lower himself within the chute by successively engaging or grasping the lower edge of the hole-walls with his hands.

To the hoop 7 I secure a rope 11, preferably at the front side thereof, and the rope 11 is of sufficient length to pass down through the chute 5 and out at the lower end thereof, and the ropes 9 9 may be extended below or beyond the chute, as shown at the bottom of Fig. 1.

In operation the chute is fastened to a window-sill by means of the hooks 8 and is so proportioned in length that it will extend to the ground and preferably is made long enough so that the lower end of the chute may be carried at some distance from the building, so as to form a curved plane. The lower end may be secured to a support by means of the ends of the ropes 9, as well as by other guy-ropes, any number of which may be secured to either end of the chute, or the lower end of the chute may be held by men. When in readiness, the people to be saved are passed into the chute at the top and slide down the inclined or curved slope to the street at a very rapid pace, during which

time there is no danger from being burned by the flames, and by reason of the ventilation-holes 10 there is no danger of suffocation should one become lodged in the chute, or the people can lower themselves gradually by catching in the successive openings with their hands. This would be absolutely necessary if the chute were not long enough to be carried to a sufficient distance at the bottom from the base of the building to form a sufficient incline to break the descent. In that case if the flames were pouring from the lower stories a person could pass down through the chute and be protected from the flames while using the chute as a ladder; but if no danger from flames then a person could pass up or down the chute on the outside by means of the holes 10, as previously described. In case a child was to be lowered the rope 11 could be drawn up and the child tied to the end of it and lowered through the chute in safety, or the line 11 can be used by any person descending through the chute to regulate the speed at which they shall pass down the same. It is also evident that the lower end of the chute could be drawn up by means of the rope 11, and a child could be placed in the same and lowered to the street; but it would be preferable to lower a child by means of the rope, although a child could be sent through the chute with perfect safety without anything to stop its descent except the incline of the chute itself if the chute were of proper length.

While I have described my invention as being applicable to saving life in case of fire on land, it is evident that the device would be very valuable in passing people from a ship into a lifeboat at sea in case of disaster and the sea were very rough, as a person could not see the water and become frightened until he had landed in the boat.

By reason of the two ropes 9 9 on the upper side, with the greater part of the circumference of the chute below the same, the chute is not so liable to become twisted as where no ropes are used or even if the chute were made square with a rope at each corner.

I am aware that fire-escapes have been invented similar to my invention, so that I do not claim a flexible chute, broadly; but

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

1. A fire-escape comprising a flexible tube or chute, having ventilation-holes, as 10, so disposed that the said chute may be used as a ladder with the said holes as steps, and two ropes, 9, 9, secured along the front edges of the chute the full length thereof whereby the greater part of the circumference of the chute is in the rear of said ropes, as and for the purpose set forth.

2. The herein-described fire-escape comprising a flexible chute, as 5, having a fire-proof covering, and ventilation-holes, as 10, two ropes, as 9, 9, secured along the front edges of the chute the full length thereof whereby the said chute is made substantially D-shaped in form when in use, the straight side of which is in front, and a D-shaped hoop fastened in the upper end thereof, as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH JENNINGS.

Witnesses:
E. VAN ZANDT,
ROBERT F. WARK.