

No. 645,561.

Patented Mar. 20, 1900.

P. GRITTINGER.
FIRE ESCAPE.

(Application filed Dec. 12, 1899.)

(No Model.)

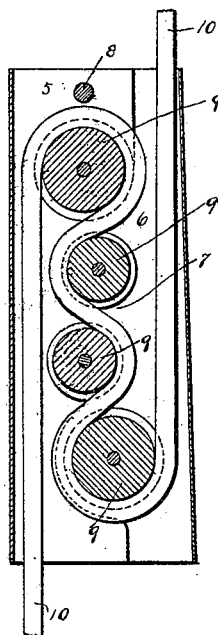


Fig. 1.

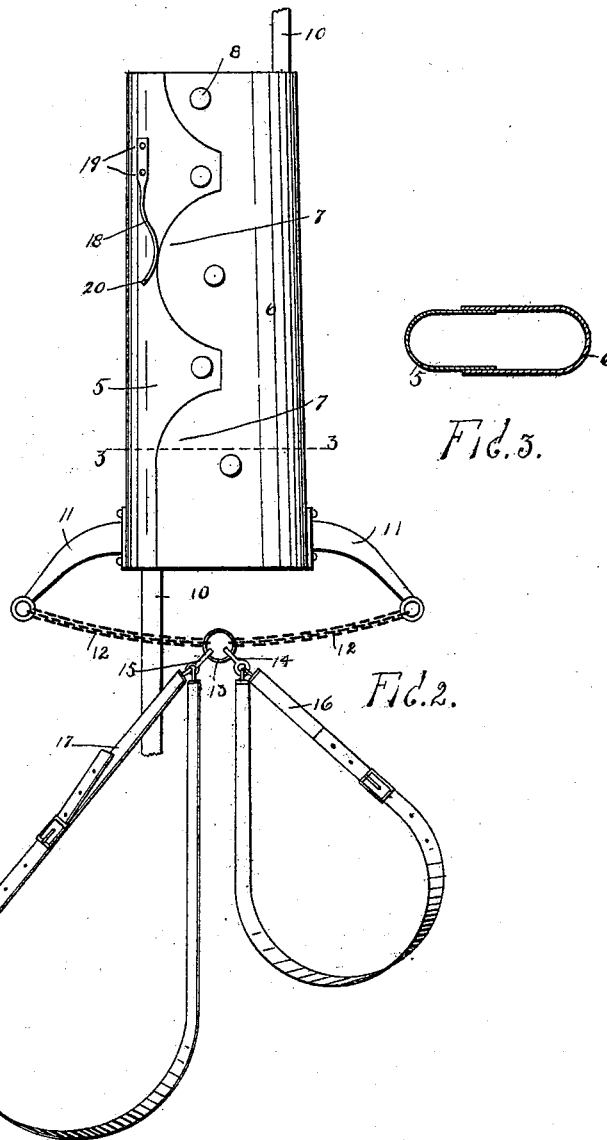


Fig. 3.

Fig. 2.

WITNESSES
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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 645,561, dated March 20, 1900.

Application filed December 12, 1899. Serial No. 740,039. (No model.)

To all whom it may concern:

Be it known that I, PAUL GRITTINGER, a citizen of the United States, residing at Cornwall, in the county of Lebanon and State of Pennsylvania, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to fire-escapes; and the object thereof is to provide a fire-escape in the use of which the speed of descent shall be automatically maintained invariable whatever the weight of the person or article descending.

With this and other objects in view my invention consists in the construction and arrangement of parts hereinafter set forth.

In the accompanying drawings, forming part of this specification, in which like reference characters denote like parts in the several views, Figure 1 is a longitudinal section of the body of a fire-escape constructed according to my invention; Fig. 2, a side elevation of the entire fire-escape, and Fig. 3 a transverse section thereof on the line 3 3 of Fig. 2.

In the practice of my invention I provide a body portion consisting of two members 5 and 6, each of which is semitubular in form and the edges of which are provided with cheeks or projections 7. The members 5 and 6 are so arranged relatively that the member 6 overlaps the member 5, forming a casing open at the ends, and said members are pivotally connected adjacent their upper ends at 8. Each of the members of the body portion is provided with two pairs of cheeks 7, oppositely arranged, and the cheeks of the inner member 5 are arranged alternately with the cheeks of the outer member 6, and connected with each pair of cheeks is a pulley 9, four of which are shown, and the intermediate rollers 9 are of less diameter than the top and bottom rollers.

A rope 10 is passed about the rollers 9 in a zigzag course, and one end of said rope is extended through the open top of the body portion of the fire-escape, the other extending through the open bottom thereof, said ends doubling upon the portion of rope which

passes about the pulleys 9. Connected with the lower portion of each of the members of said body portion is a projecting downwardly-curved arm 11, with the outer ends of which are connected chains 12, the free ends of which are connected by a ring 13, and connected with said ring by snap-hooks 14 and 15 are a pair of slings 16 and 17, adapted for adjustment about a person or article.

The inner member 5 of the body portion is provided with a band-spring 18, connected by one end at 19 therewith, and the free end of which bears operatively upon one of the cheeks 7 of the outer member 6, whereby normally the lower ends of said members have a separating tendency, allowing the rope 10 to normally pass with comparative ease about the rollers 9.

The operation of my improved fire-escape will be evident from the foregoing description when taken in connection with the accompanying drawings.

The upper end of the rope 10 is connected with the structure from the level of which it is desired to lower a person or goods, and the lower end, together with the balance of the rope, is let down to the pavement or level to which it is desired to lower the same. The slings 16 and 17 are then adjusted beneath the shoulders and about the lower limbs of a person to descend or about a box, trunk, or other article, and the same is swung free of the elevated structure and commences its descent. Due to the relative arrangement of the members 5 and 6 and the pulleys 9 the greater the strain imposed upon the arms 11 the closer together will be forced the said members and the more tortuous will become the line of travel of the rope 10 about the pulleys 9, and hence the greater the friction on said pulleys and the greater the resistance to the movement of said rope. It is therefore seen that as the body portion of the fire-escape and the load thereof descend the speed of descent will be constant, being under control of the friction of the rope 10 and pulleys 9, which friction will be proportionate to the weight of the load.

I do not limit myself to the specific construction and arrangement of parts herein specified, but reserve the right to vary the same within the scope of my invention.

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

5 1. A fire-escape, comprising a body consisting of two members which are pivotally connected adjacent their upper ends, and each provided with a plurality of pulleys which are arranged alternately upon the members, a suspension device connected with the
10 lower ends of both of said members, and a rope which is passed about said pulleys, and adapted to be connected with a building or other structure, substantially as shown and described.

15 2. A fire-escape, comprising a body consisting of two semitubular overlapping members which are pivotally connected adjacent their upper ends, and each provided with a plurality of pulleys which are arranged alternately upon the members, a suspension device connected with the lower ends of both
20 of said members, and a rope which is passed about said pulleys and adapted to be connected with a building or other structure, substantially as shown and described.

25 3. A fire-escape, comprising a body consisting of two semitubular overlapping members which are pivotally connected adjacent their upper ends, and each provided with a

plurality of pulleys, said members being provided at the edges with projecting cheeks in which said pulleys are mounted, a suspension device connected with the lower ends of both of said members, and a rope which is passed about said pulleys and adapted to be connected with a building or other structure,
35 substantially as shown and described.

4. A fire-escape comprising a body consisting of two members which are pivotally connected adjacent their upper ends, and each provided with a plurality of alternately-arranged pulleys, a suspension device connected with the lower ends of both of said members, said suspension device consisting of an arm connected with the lower end of each of said members, and slings detachably connected with said arms, and a rope which is passed about said pulleys and adapted to be connected with a building or other structure,
45 substantially as shown and described.

50 In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 5th day of December, 1899.

PAUL GRITTINGER.

Witnesses:

HENRY SHIRES,
JOHN ADAMS.