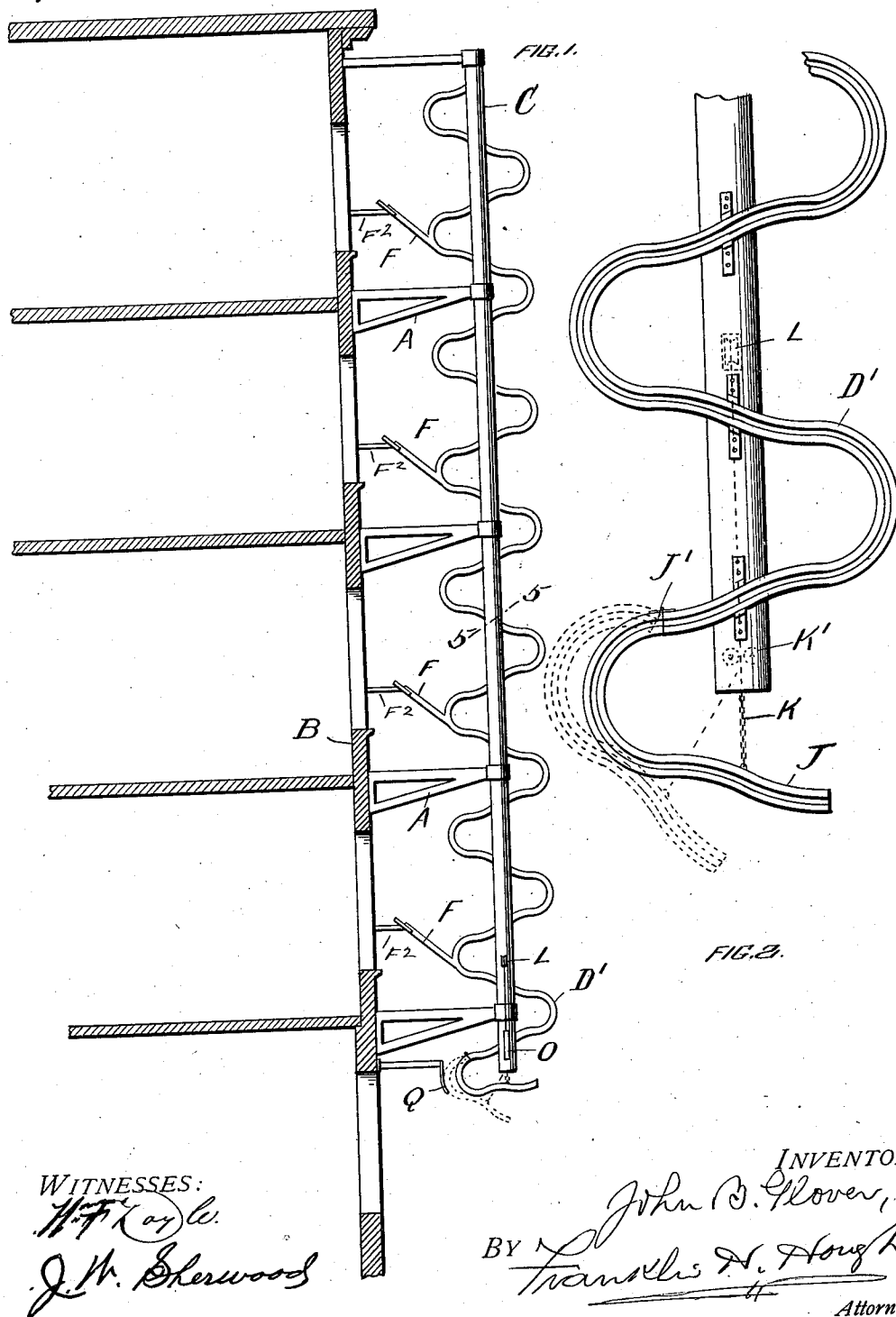


J. B. GLOVER.
FIRE ESCAPE.
APPLICATION FILED JAN. 27, 1912.

Patented June 4, 1912.
3 SHEETS—SHEET 1.

1,028,453.



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FIG. 3.

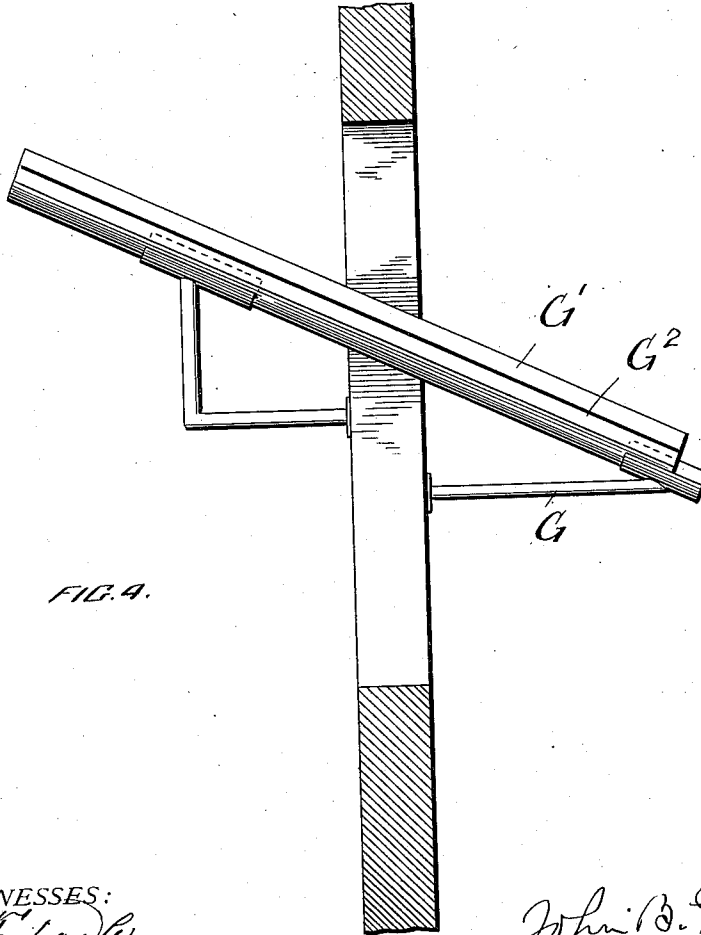
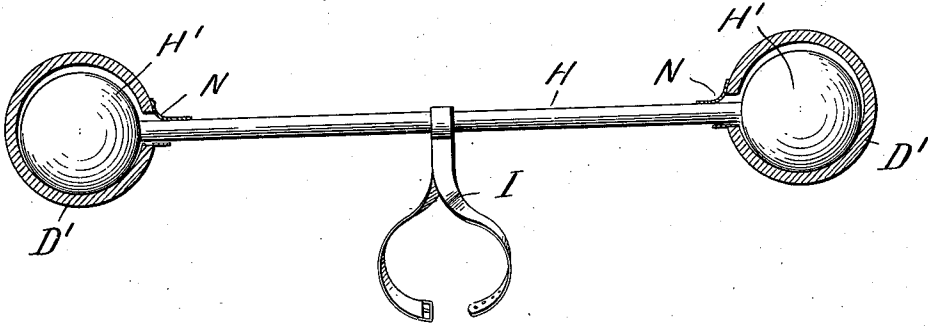


FIG. 4.

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FIG. 5

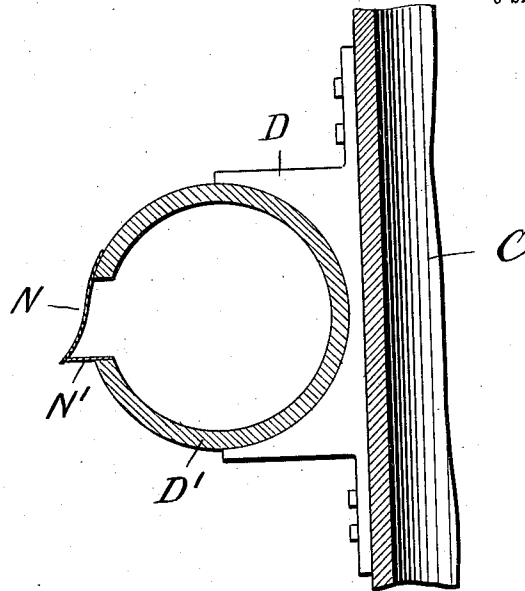
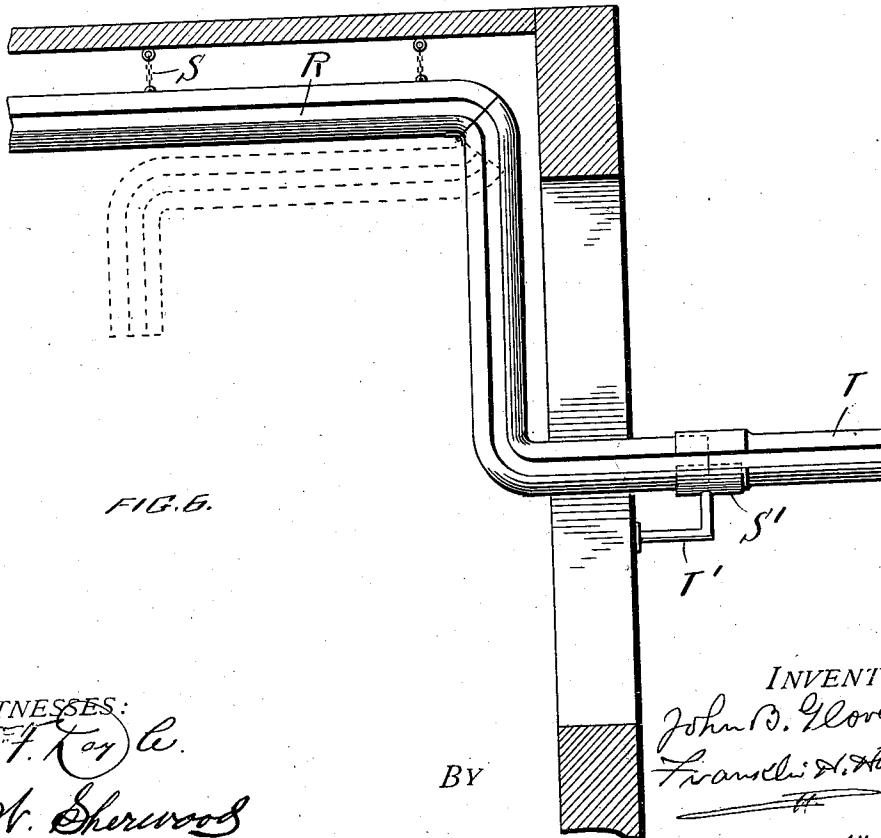


FIG. 6



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UNITED STATES PATENT OFFICE.

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FIRE-ESCAPE.

1,028,453.

Specification of Letters Patent.

Patented June 4, 1912.

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To all whom it may concern:

Be it known that I, JOHN BERRIEN GLOVER, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in fire escapes and consists essentially in the provision of inclined or zigzag tubes having oppositely disposed slots or openings extending the length thereof down which a supporting member carrying a person making the escape from the building is adapted to travel, suitable bail-shaped ends to the member movable within the tubes.

My invention comprises various details of construction and combinations and arrangements of parts which will be hereinafter fully described, shown in the accompanying drawings and then specifically defined in the appended claims.

I illustrate my invention in the accompanying drawings, in which:—

Figure 1 is an elevation showing the application of my improved fire escape to the side of a building. Fig. 2 is an enlarged view in elevation of a portion of the spirally disposed tube, showing the longitudinal slot formed therein. Fig. 3 is a cross sectional view through two of the tubes and a carrier member. Fig. 4 is a detail sectional view showing the means for directing the carrier tube into the main slotted tubes. Fig. 5 is a cross sectional view on line 5—5 of Fig. 1, and Fig. 6 is a detail view showing a modified form of a hinged connection for guiding the carrying member into the entrances of the slotted tubes.

Reference now being had to the details of the drawings by letter, A, A designate bracket members which are adapted to be secured to the wall B of a building, and C designate upright beams or tubings which are fastened to said brackets and rigidly held in vertical positions. Bracket members D are fastened to the beam C, at differ-

ent locations, and each is provided with a concaved recess, as shown clearly in Fig. 5 of the drawings. A zigzag tube D' is fastened by any suitable means to the bracket members D in the recesses thereof, it being understood that there are two of said zigzag tubes similarly constructed and mounted one upon either side of the window. Each tube D is provided with a longitudinal slot or opening extending its entire length and opposite the various stories of the building are branching tubes, each designated by letter F, communicating with said tubes D' and each supported by a bracket member F².

Fastened upon the bracket members G are the sectional tubes G', each having a longitudinal slot G² thereon, and two of said bracket members are adapted to be positioned opposite the opening on each landing of the building so that persons may escape from the various floors to the ground beneath in safety in a manner which will be presently described. The sectional tubes G' are adapted to communicate with the branching tubes F, one opposite each opening.

A carrier member, designated by letter H, is provided with spherical-shaped ends H', said member H being of such a diameter as to move freely in the two slots in the tubes opposite each other and the spherical ends H' being adapted to be positioned within the tubes, as shown in the cross sectional view of the drawings. A cover, designated by letter N, is mounted upon the upper edge of each slot in the tube and serves, when closed against the projecting flap N', to form a closure to the slot to prevent foreign matter, ice, rain, etc., from entering the tubes, said cover being adapted however to yield under the pressure of the carrier member H as it moves against the same in its downward descent. Said cover is made preferably of sections, forming convenient means for attaching the same about the covered portions of the slotted tubes. Said projections N' serve as means for keeping the cover from being at right angles with the carrier member while entering the tube.

Any form of means, such as a strap I, is attached to the carrier member and forming means for holding a person thereto while making a descent, it being understood that the weight of the person will cause the carrier member to make the descent down through the two slots, the spiral arrange-

ment of the tubes serving as means to check the downward movement. The lower portions of the tubes have tubular sections J hinged as at J' to the lower ends of the tubes D, and chains K are fastened to the tubular sections J and passing against the anti-friction wheels K' extend over the pulleys L and have weights O secured thereto and serve normally to hold the tubular sections in the position shown in solid lines in the drawings but said tubular sections J are adapted to swing upon their hinges under the weight of the carrier member to which a person may be attached as it approaches the lower free end of the section J and, when the weight of the carrier overbalances the weight O.

A buffer, designated by letter Q, is positioned at any suitable location and adapted to limit the swinging movement of the tubular sections J in one direction. It will be noted that, by the peculiar shape of the sections J the downward movement of the carrier with the person attached thereto will be broken by the time the exit ends of the sections J are reached. After the weight has been relieved from the sections J, the weight O will tend to return said sections J to their normal positions.

In Fig. 6 of the drawings, I have shown a slightly modified form of means for suspending the hinged portion R of a tubular section for delivering the carrying member into the entrance of the slotted tubes and in which the sections R, which are longitudinally slotted, are held to the ceiling by means of chains S and have connection at S' with one of the branching tubes and slotted sections T which are supported upon the bracket member T'.

The operation of my invention will be readily understood and is as follows:—It is my purpose to have a plurality of carrier members, conveniently located for use on the various floors of the buildings to which the fire escape is attached and each person making a descent inserts the carrier member in the tubular section for delivering the carrier member into the entrance of the tubes, after the person is secured by any suitable means to said carrier. The weight of the person will cause the carrier members to descend through the spiral tubes, the in-

clinations of the slots of which are such as to cause the person to descend gradually and in safety to the ground below. As the carrier descends, the covers along the marginal edges of the slots of the tube will open and automatically close after the carrier is passed, thus preventing any snow, ice or foreign matter from entering the tubes.

What I claim to be new is:—

1. A fire escape comprising longitudinally slotted zigzag tubes, upright beams, bracket members fastened to the latter and recessed to receive said zigzag tubes, a carrier member movable in oppositely disposed slots of the tubes, the ends of the carriers being spherical-shaped and movable within the tube, means for holding a person upon the carrier, covers for the slots of the tubes and opened by the carrier as it comes in contact therewith, as set forth.

2. A fire escape comprising longitudinally slotted zigzag tubes, upright beams, bracket members fastened to the latter and recessed to receive said spiral tubes, a carrier member movable in the oppositely disposed slots of the tubes, the ends of the carriers being spherical-shaped and movable within the tube, means for holding a person upon the carrier, covers fastened to the upper edge of each slot of the tube and having their opposite edges free, and extensions upon the under edge of each slot and against which said covers are adapted to contact, as set forth.

3. A fire escape comprising a series of zigzag, slotted tubes, means for holding the same in an upright position, slotted, curved, tubular sections hinged to the lower ends of said tubes, weighted means for holding the same in their normal positions, a carrier movable through the slots of the tubes and sections hinged thereto, designed to carry a person whose weight will cause said sections to swing upon the hinges as the carrier approaches the exit ends of said sections, as set forth.

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

JOHN BERRIEN GLOVER.

Witnesses:

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