

J. H. WRAY.

FIRE ESCAPE.

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933,685.

Patented Sept. 7, 1909.

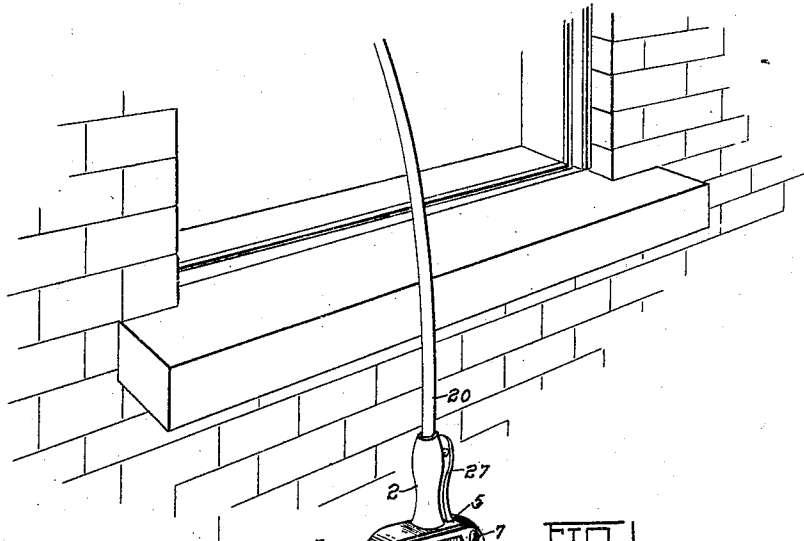


FIG. 1.

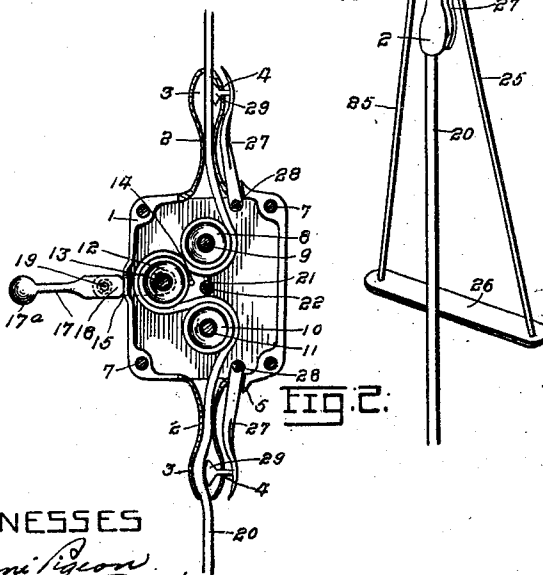


FIG. 2.

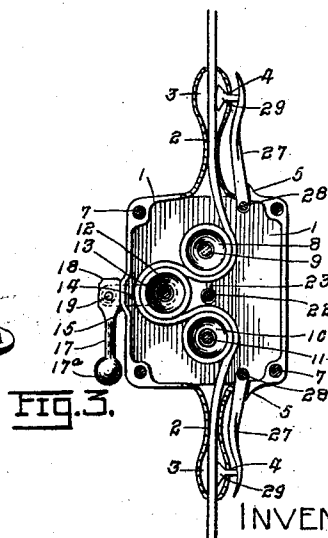


FIG. 3.

WITNESSES

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FIRE-ESCAPE.

933,685.

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To all whom it may concern:

Be it known that I, JOSEPH HEBER WRAY, a subject of the King of Great Britain, residing at the town of Mountain View, in the Province of Alberta, in the Dominion of Canada, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification.

The invention relates to improvements in fire escapes, as described in the present specification, and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially in the novel arrangement and construction of parts whereby a casing having a hollow handle extending from each end thereof is threaded onto a rope, said casing having a plurality of pulleys journaled therein to form a U-shaped loop in said rope, and means attached thereto for adjusting the extent of said loop and means for controlling the travel of said casing on said rope.

The objects of the invention are to provide a simple, efficient and portable fire escape, which may be reversed to operate from each end of the rope and which will be under positive control during the descent of a person from a burning building either by the person descending or a person on the ground.

In the drawings, Figure 1 is a perspective view of the fire escape with the release lever set in readiness for descent down the rope. Fig. 2 is a sectional view of the fire escape with the release lever set in running position and one of the brake levers applied. Fig. 3 is a sectional view of the fire escape with the release lever set in the stop position.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings, 1 is a casing of substantially rectangular formation having an open front, and the handles 2, said casing being preferably cast from a suitable metal, the handles 2 thereof being hollow and enlarged toward the end thereof to form the inner recess 3.

4 are orifices through the handles 2 at the recessed portions 3 thereof, and 5 are slots in the ends of the casing 1 adjacent to the base of the handles 2.

6 is a face plate secured over the open front of the casing 1 by the bolts 7.

8 is a pulley slightly grooved and journaled on the pin 9 extending through suitable orifices in the back of the casing 1 and the face plate 6 toward the top thereof.

10 is a pulley journaled on the pin 11 extending through suitable orifices in the back of the casing 1 and the face plate 6 toward the bottom thereof and in vertical alinement with the pulley 8.

12 is a pulley journaled on the pin 13 extending through the lateral slots 14 in the back of the casing 1 and the face plate 6, said slots extending from one side of said casing centrally toward the pins 9 and 11 and in right-angular alinement with the vertical alinement of said pins.

15 are links journaled at their inner ends on the pins 13, said links being slidably arranged in correspondingly-shaped grooves formed by the bosses 16 on the exterior face of the back of the casing 1 and the face plate 6.

17 is a release lever having the squared inner end 18 journaled on the pin 19 extending between the links 15 where said links extend laterally beyond the side of the casing 1. The release lever 17 is weighted at the outer end thereof by the ball 17^a, which normally holds said lever to a vertical position.

20 is a rope threaded through the hollow handle 2 at the top of the casing and around the pulley 8 on the side farthest from the pulley 12, then looped around the pulley 12, again over the pulley 10 and through the hollow handle at the bottom of the casing, the pulley 12 forming a U-shaped loop in said rope.

When the lever 16 is in its vertical position the links 15 are free to move in the slots 14 until the pulley 12 passes the rope 20 firmly between said pulley and the pulleys 8 and 10 causing quite a friction between the said pulleys and preventing the rope from running free around them. When the said lever 17 is raised to its horizontal position the squared end thereof is of sufficient length to engage the side of the casing 1 and draw the links 15 outwardly in the slots 14. This releases the pulley 12 from engagement with

the pulleys 8 and 10, and the rope is free to run around said pulleys.

21 is a small friction roll journaled on the pin 22 extending through the vertical slots 23 in alinement with the pins 9 and 11 of the pulleys 8 and 10, said slots being of sufficient length to allow the roller to engage with the rope passing over either of the pulleys 8 and 10, accordingly as the pin 21 is drawn to the bottom or top of the said slots 23.

24 are eyes journaled on the ends of the pin 22 where it extends through the back and front of the casing 1.

25 are swing ropes secured in the eyes 24, said ropes supporting the swing-bar 26 at a suitable distance below said casing 1, so that a person may straddle the swing, and have the casing in a convenient position to operate the same when traveling down the rope.

27 are brake levers pivotally secured on the pins 28 extending through the casing 1 adjacent to the base of the handles 2, said brake levers extending adjacent to the handles 2 and having the brake shoes 29 projecting inwardly therefrom through the orifices 4, said brake shoes having the heads thereof rounded in conformance with the shape of the recess 3.

In the operation of the device, the rope 20 at one end thereof is preferably provided with an eye or ring, which may be readily caught on to a suitable hook secured to the wall of the room adjacent to the window, although said rope may be fastened to any convenient place in the room. The other end of the rope is then thrown from the window and the release lever set in its vertical position as shown in Fig. 3, setting the pulleys hard against one another, so that said casing cannot travel along the rope. A person wishing to escape from the room then straddles the swing-bar 26, and catching the lower handle with one hand and the release lever with the other, is in readiness for the descent. The release lever may now be raised to the horizontal position and the person descend from the building at will. The weight of the person on the swing supported by the roller 22 will press said roller firmly against the rope as it passes over the pulley 10, and thereby cause considerable friction and prevent a sudden descent.

The arrangement of the several parts enables the device to work in an exactly similar manner in either direction, and after a descent is made the ropes need not be drawn back through the device, as it is reversible and immediately ready for operating providing the ends of the rope are reversed.

A person in an unconscious condition may be safely lowered to the ground from a burning building, if secured in the swing by a

fireman or other person, and the release handle set in "running" position, as the lower end of the rope may be held by a person on the ground, and if a pull is made on the rope it will check the descent of the device and on releasing the pull on the lower end the device will again descend thereby lowering the unconscious person gradually.

What I claim as my invention is:

1. In a fire escape, a casing of substantially rectangular shape having front and back plates and orifices toward each end thereof said front and back plates and vertical slots intermediate of the length thereof through the front and back plates in vertical alinement with the aforesaid orifices and lateral slots in right-angular alinement with said vertical slots and toward the side of said casing, pulleys journaled on pins extending through said orifices, a pulley journaled on a pin extending through said lateral slots, links secured to the projecting ends of said pin and extending laterally from said casing, a lever having a squared inner end journaled on a pin extending between the projecting ends of said links, a hollow handle projecting from each end of said casing and having a recessed interior surface toward the outer end thereof and an orifice therethrough opposite said recess, a rope threaded through said hollow handles and around said pulleys to form a U-shaped loop, a roller journaled on a pin extending through said vertical slots, eyes secured on the ends of said pin projecting from said vertical slots, ropes secured at one end thereof to said eyes, a swing-bar secured to the other end of said ropes, and brake levers contacting with said rope opposite said recesses in said handles.

2. In a fire escape, a casing of substantially rectangular shape having front and back plates and orifices toward each end thereof through said front and back plates and vertical slots intermediate of the length thereof through the front and back plates in vertical alinement with the aforesaid orifices and lateral slots in right-angular alinement with said vertical slots and toward one side of said casing, pulleys journaled on a pin extending through said lateral slots, links secured to the projecting ends of said pin and extending laterally from said casing, a lever having a squared inner end journaled on a pin extending between the projecting ends of said links, a hollow handle projecting from each end of said casing and having a recessed interior surface toward the outer end thereof and an orifice therethrough opposite said recess, a rope threaded through said hollow handles and around said pulleys to form a U-shaped loop, a roller

journaled on a pin extending through said vertical slots, eyes secured on the projecting ends of said pin projecting from said vertical slots, ropes secured at one end thereof to said eyes, a swing-bar secured to the other end of said ropes, brake levers journaled on pins extending through said casing adjacent to said hollow handles, and brake shoes extending from said brake levers through said

orifice in said hollow handles and adapted to contact with said rope opposite said recesses in said handles.

Signed at Mountain View, Alberta, Canada, this 16 day of Dec. 1908.

JOSEPH HEBER WRAY.

Witnesses:

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ERNEST PARRISH.