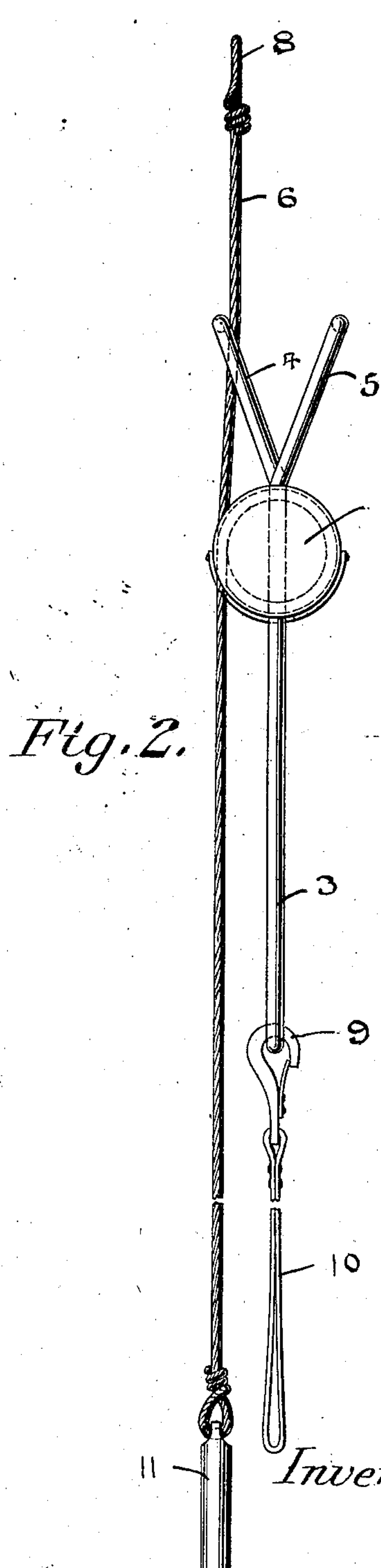
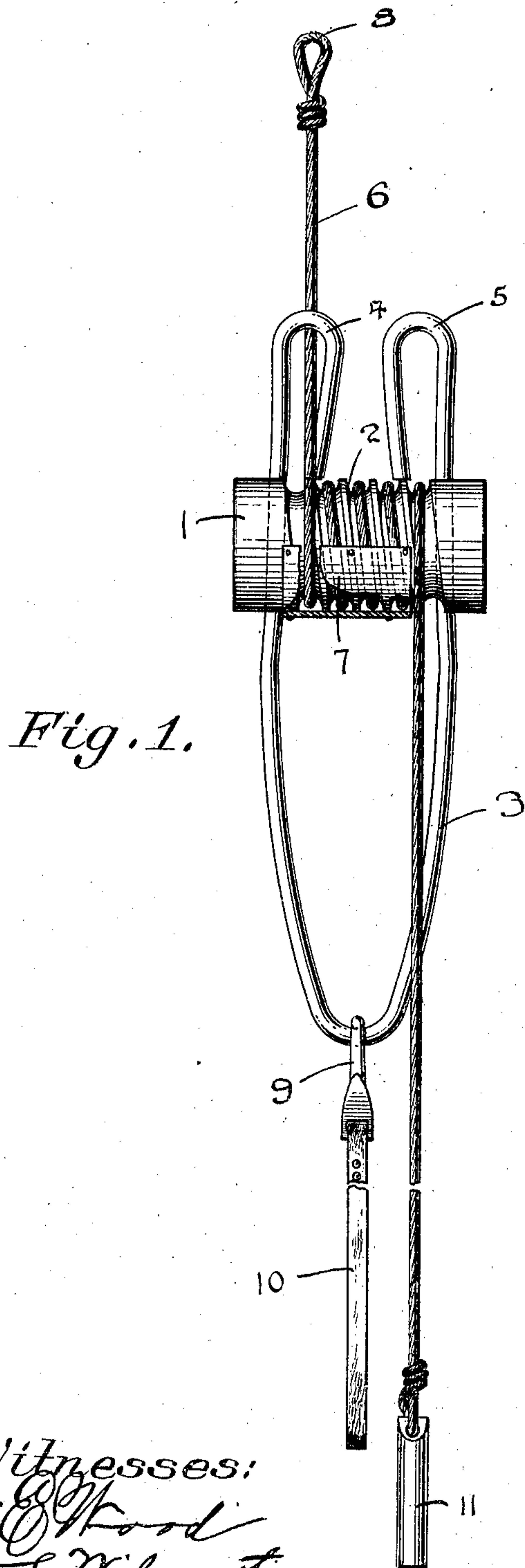


M. F. WELCH.  
FIRE ESCAPE.  
APPLICATION FILED MAY 15, 1909.

963,409.

Patented July 5, 1910



Witnesses:  
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# UNITED STATES PATENT OFFICE.

MARION F. WELCH, OF HOLLIS, KANSAS.

## FIRE-ESCAPE.

963,409.

Specification of Letters Patent.

Patented July 5, 1910.

Application filed May 15, 1909. Serial No. 496,320.

*To all whom it may concern:*

Be it known that I, MARION F. WELCH, a citizen of the United States, residing at Hollis, in the county of Cloud and State of Kansas, 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.

My invention relates to new and useful improvements in fire-escapes and more particularly to that class described as portable fire-escapes and my object is to provide a drum around which a rope is wound to cause friction and prevent undue rapidity of descent.

A further object is to provide a drum having guides thereon to prevent the rope from entangling as it passes thereover.

A further object is to provide a hanger for carrying a body-engaging strap; and a further object is to provide means for guiding the rope beyond the drum and a still further object is to provide a weight on the rope to insure the gradual descent in case the party escaping loses his balance or faints from fright, etc.

Other objects and advantages will be hereinafter referred to and more particularly pointed out in the specification and claims.

Referring to the drawings forming a part of this application, Figure 1 is a front elevation of the device with a guide plate thereon partly in section, and, Fig. 2 is an end elevation of the same.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 is a stationary drum having the grooves 2 thereon extending longitudinally to points adjacent both ends of said drum. A hanger 3 forming a loop below said drum is adapted to extend through openings in the ends thereof, and the terminals of said hanger hooked to form guides 4 and 5 for a rope or cable 6 which is adapted to be wound two or more times around the grooves 2 of said drum 1. The hooked terminals or guides 4 and 5 are disposed or bent to opposite sides of the axial trend of said drum and an additional guide plate 7 substantially semi-circular in outline is secured to the lower half of the drum covering that portion which is grooved, thereby aiding in pre-

venting the rope from entangling and twisting as the drum is raised or lowered upon said rope. The rope has formed at one end thereof a loop or eye 8 which is adapted to engage a hook or similar instrument secured to the frame of a window or the like and secured to said looped hanger 3 through the medium of a snap-hook 9, is a body-engaging strap 10, whereby in case of sudden fire, the loop 8 may be engaged with the hook and the strap 10 engaged with the body and the person lowered by paying out portions of the descending portion of the rope.

It often happens that in cases of fire in which these portable fire-escapes are used that the party using the same becomes frightened to such an extent as to lose his balance, thereby releasing his hold upon the rope and naturally falls to the ground and in all cases is killed or very seriously injured and to obviate such difficulties, I have provided a weight 11 upon the end of the rope opposite that which engages the hook within the window frame. It will now be seen that in case of a person losing his balance or fainting, thereby releasing his grip upon the rope, the weight will cooperate with the friction drum making his descent gradual instead of sudden, as under ordinary circumstances. In operation, the rope is first wound, as shown, around the grooves of said friction drum and the end having the eye 8 formed thereon passes through the hooked guide adjacent that particular end and the opposite end carrying the weight allowed to drop downwardly and when said loop or eye is engaged with a stationary object, the party wishing to descend passes the strap 10 about his body and by gripping the downwardly extending portion of the rope 6 and paying out slowly portions thereof, his descent will be gradual, the rapidity of his descent depending largely upon the speed with which the rope is allowed to pass around the drum.

It will further be seen that I have provided a portable fire-escape in which a friction drum is used, around which a rope is wound, thereby insuring gradual descent and it will further be seen that I have provided means cooperating with said friction drum to prevent the entangling and combining of the rope used with said drum. It will be seen that the grooves in the drum, the guide plate attached thereto and the hooked terminals of the hanger forming guides for



said rope, all tend to prevent the binding and entangling of said rope as it passes around said drum and that the disposing of said grooves at an angle aid in the friction between the rope and said drum. It will still further be seen that I have provided a fire-escape of simple and economical structure and effective in operation.

What I claim is:—

10 1. The combination with a drum; of a rope adapted to movably engage said drum and a hanger mounted on said drum, the upper ends thereof being hooked to form guides and said guides bent to opposite sides of the axial trend of said drum and forming guides for said rope.

20 2. A fire escape of the class described, comprising a drum having circumferential grooves therein extending a portion of its length, a rope adapted to frictionally engage the grooves in said drum, a hanger mounted on said drum, the ends thereof being hooked to form guides for said rope member, said guides being bent to opposite sides of the axial trend of said drum, and a body-engaging means carried by said hanger.

30 3. A fire escape of the class described, comprising a drum, a hanger mounted on said drum and a rope adapted to frictionally engage said drum, the ends of said hanger forming guides for said rope and a semi-

circular plate secured to the lower half of said drum to form additional means for guiding said rope.

4. A fire escape comprising a drum, a rope adapted to frictionally engage said drum and a hanger secured to and extending below said drum, said hanger being substantially U-shaped in outline and having the arms thereof passing through the ends of said drum and bent to form guides for said rope.

5. A fire escape of the class described, comprising a drum having circumferential grooves therein, a rope adapted to frictionally engage the grooves in said drum, a semicircular plate secured to the lower half of said drum to cover said grooves and aid the guiding of said rope thereover, and a hanger substantially U-shaped in outline and secured to said drum so as to extend therebelow, the arms of said hanger extending through the ends of said drum and bent above to form guides for said ropes.

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

MARION F. WELCH.

Witnesses:

WM. MCK. BURNS,  
A. L. WILMOTH.