No. 725,251. PATENTED APR. 14, 1903.

A. B. HOLSON.

FIRE ESCAPE.

APPLICATION FILED JUNE 14, 1902.

NO MODEL.

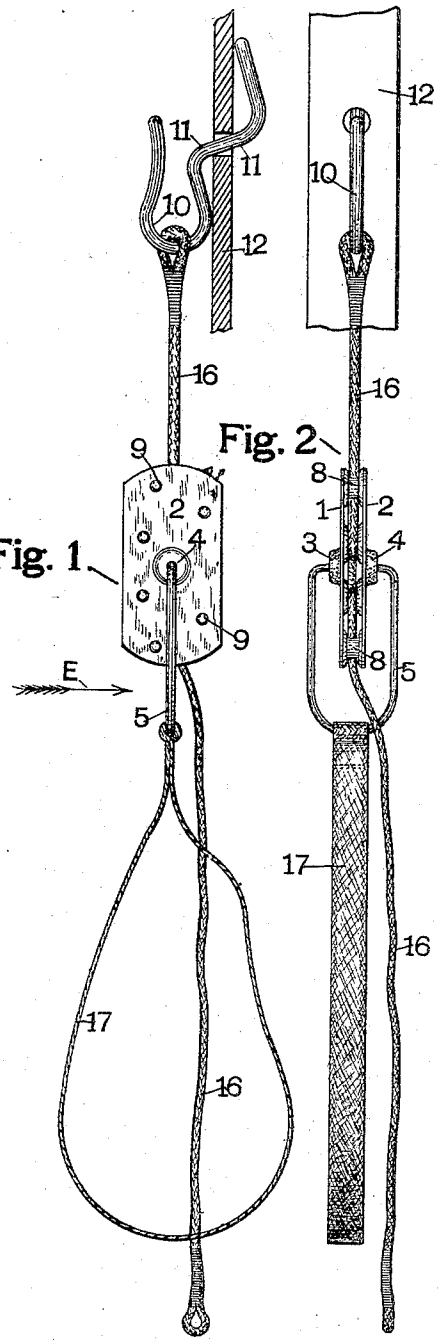


Fig. 1.

Fig. 2.

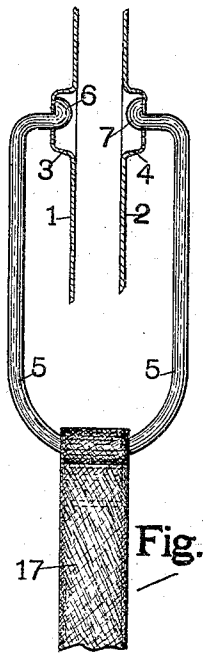


Fig. 4.

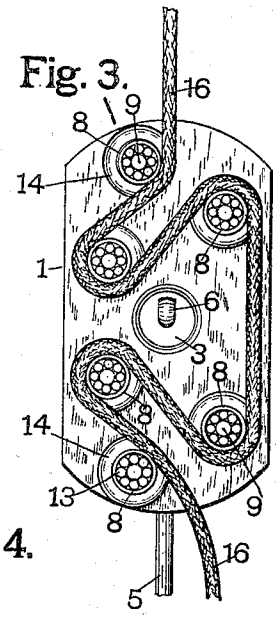


Fig. 3.

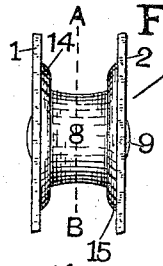


Fig. 5.

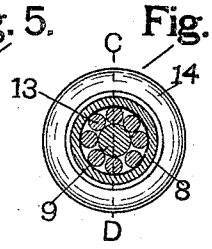


Fig. 6.

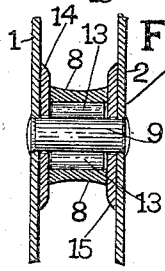


Fig. 7.

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UNITED STATES PATENT OFFICE.

ALBERT B. HOLSON, OF CHICAGO, ILLINOIS, ASSIGNOR OF THREE-FOURTHS TO ORR AND LOCKETT HARDWARE COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 725,251, dated April 14, 1903.

Application filed June 14, 1902. Serial No. 111,716. (No model.)

To all whom it may concern:

Be it known that I, ALBERT B. HOLSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Fire-Escape, of which the following is a specification.

My invention relates to fire-escapes; and it consists in a special construction which is easily attached to a building or other stationary object by any unskilled person and the movable parts of which are not liable to become inoperative on account of a lack of lubrication, the same being illustrated in the accompanying drawings and fully described hereinafter.

Figure 1 is a side elevation showing the apparatus hung to a special form of hook which is adapted to being quickly placed in engagement with a hole in a window-frame or any other similar stationary part of a building. Fig. 2 is a front elevation looking in the direction indicated by arrow E. Fig. 3 is a side elevation of the pulley-casing, on an enlarged scale compared to Figs. 1 and 2, but with one of the side plates and the pulley end washers removed to illustrate the operative parts and the tortuous course of the suspensory rope over the several pulleys in its passage through the casing. Fig. 4 is an enlarged front elevation of the suspensory bail and a portion of the top end of the suspensory body-strap and of the sides of the pulley-casing in section to illustrate a reliable and inexpensive method of pivotally attaching the ends of the bail to the casing. Fig. 5 is an enlarged front elevation of a portion of the sides of the pulley-casing, showing a roller-bearing pulley and the end washers thereof revolubly mounted therein. Fig. 6 is a section of the pulley on broken line A B, Fig. 5, and showing one of the end washers in elevation. Fig. 7 is an axial section, on broken line C D of Fig. 6, of three of the parts of the complete roller-bearing pulley and a portion of the sides of the casing, but with the pivotal pin and rollers for the bearing in position in side elevation.

Similar numerals indicate like parts throughout the several views.

In this instance the sides 1 and 2 of the pulley-case are metal plates, with each having a hollow projecting boss at the side central portion, as seen at 3 and 4, and through the center of each of the bosses is a hole adapted to receive the ends of the suspensory bail 5, which latter is fitted with short end portions 6 and 7, bent to a right angle to the bail and serving to hold the ends thereof in the holes of bosses 3 and 4 when the parts are in the relative position shown in Figs. 1, 2, and 4.

The suspensory hook is of the ordinary form, shown at the outer portion 10, but is bent to an S shape in the shank portion 11 to adapt it to being inserted through a hole in materials of different thickness which form a part of some stationary object, such as 12, which represents a portion of the walls of an ordinary window-box frame.

Figs. 5, 6, and 7 illustrate the construction of the pulleys, of which 8 is a cylindrically-shaped sleeve which may be quickly and inexpensively produced from ordinary metal pipe by sawing into short lengths and which may be left in the plain cylinder form or be concaved, as shown in the drawings.

The pins 9 serve the double purpose of forming the cross connections between the side plates of the casing and for the pivotal mountings of the pulleys 8, which are of sufficient internal diameter to admit of a number of cylindrical rollers 13 between the pins and the internal surface thereof. At 14 and 15 are washers loosely mounted upon the pivotal pins and separate from the sleeves 8, this arrangement permitting the rollers 13 to have an end contact with the revolving washers instead of the stationary side walls of the casing. The inside peripheral edges of the washers are rounded or beveled to prevent chafing the suspensory rope 16, which without the washers would contact the stationary sides of the casing.

In the use of this apparatus for a fire-escape a hole may be made through the side of a window-box frame of about five-eighths of an inch in diameter, which will permit shank 11 of the hook to be inserted, and the hook may then be brought to the position shown in

Fig. 1, when it will be perfectly secure from withdrawal from any downward force on the suspension-rope 16, which is in engagement with the hook, as shown.

In assembling the parts of the pulley-case and bail 5 the sides 1 and 2 of the case may be each presented at a sufficient angle to permit the entrance of the bent ends of the bail into the holes in the bosses 3 and 4, when if the sides of the case are moved to the position relative to the bail shown in Fig. 4 it is obvious that the bail will be held in engagement with the sides of the case and that the pulleys may be placed in position and the pivotal pins be inserted and the ends riveted to form the construction shown in Figs. 1 and 2.

The suspensory rope is provided with a loop at each end, and on account of the bail 5 being pivotally mounted at the central portion of the case the latter is reversible, so that either end of the suspensory rope may be attached to hook 10.

In operation the long end portion of rope 16 is permitted to fall to the ground, while the short end is in engagement with hook 10, when the person using the apparatus may adjust the loop 17 around the body, so as to assume a sitting position, and then by grasping the portion of the rope under the pulley-case and suspending himself easily regulate the speed of descent by a downward pull, which tightens the contact of the rope around the pulleys and increases the resistance in proportion to the force applied.

The form of cylinder roller-bearing shown was devised to insure a strong inexpensive construction and to prevent an undue amount of friction, which is a fault with pulleys mounted directly upon the pivotal pins when in a rusty condition and without lubrication.

I claim as my invention—

1. In a fire-escape, a rope and means for attaching one end thereof to constitute a suspensory, a series of pulleys mounted in a casing, the rope threaded through the casing in a tortuous course in contact with the pulleys, and the lower end portion of the rope pendent from the casing in combination with a body-suspensory comprising a pendent bail pivotally attached to the intermediate-of-length portion of the pulley-casing, and a pendent loop attached to the bail for the purpose stated.

2. In a fire-escape, a pulley-case comprising two side parts, a series of pins connecting the parts, a series of sleeves mounted around the pins and a series of rollers disposed around the pins and within the sleeves, washers mounted on the pins between the ends of the sleeves and rollers and the side parts of the casing, substantially as and for the purpose shown and described.

3. In a fire-escape, a pulley-case comprising side parts and means for connecting such parts, as stated, holes in the central portions of said parts, and a bail having the ends thereof pivotally mounted in the holes, the ends of the bail projecting into the casing and bent to an angle opposite the main body of the bail and serving for the purpose stated.

In testimony whereof I have signed my name in the presence of two witnesses.

ALBERT B. HOLSON.

Witnesses:
OSCAR SNELL,
EDWARD STONE.