

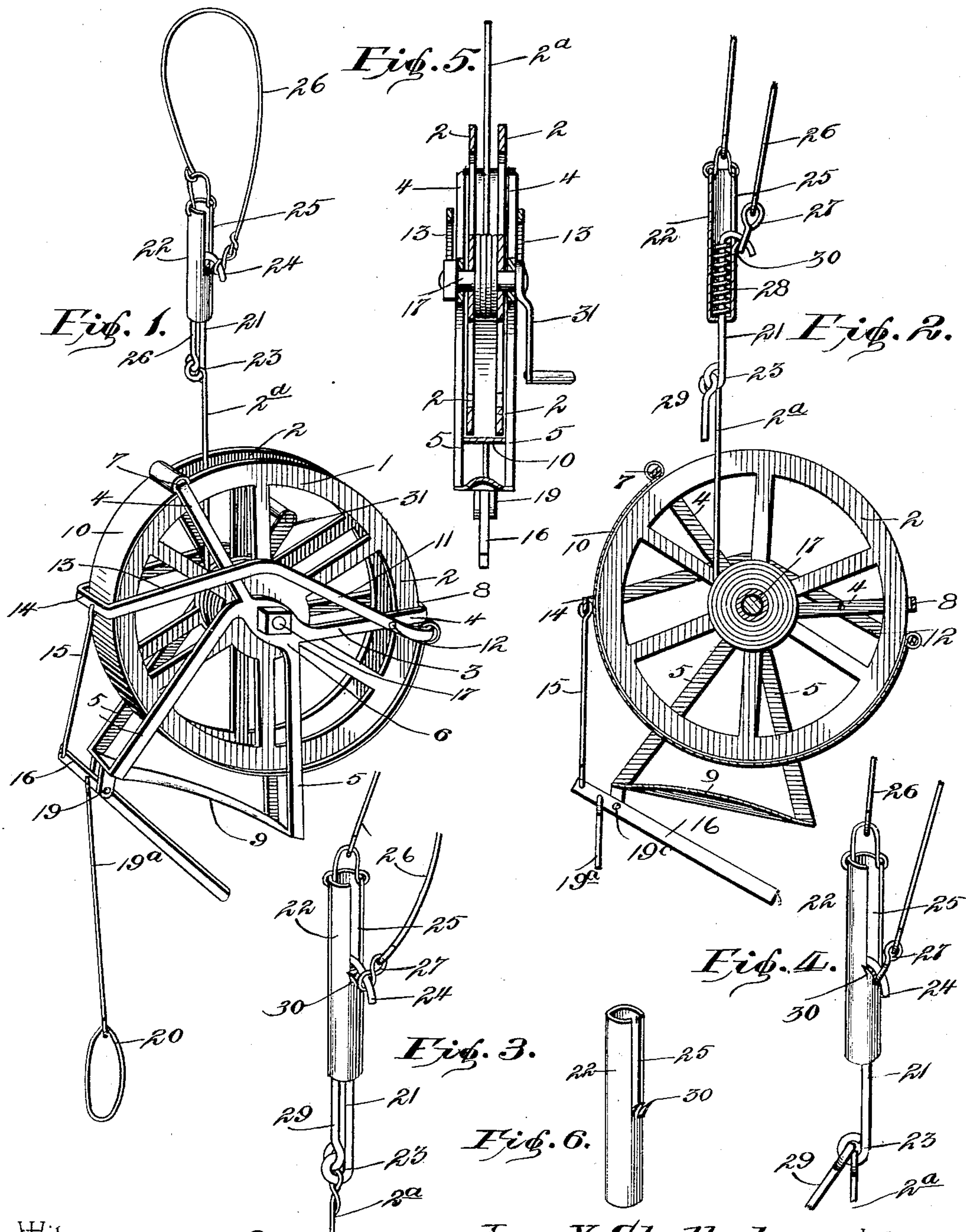
No. 630,993.

Patented Aug. 15, 1899.

J. Y. SHALLENBERGER.
FIRE ESCAPE.

(Application filed May 16, 1899.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 630,993, dated August 15, 1899.

Application filed May 16, 1899. Serial No. 717,059. (No model.)

To all whom it may concern:

Be it known that I, JESSE Y. SHALLENBERGER, a citizen of the United States, residing at Strasburg, in the county of Shelby and State of Illinois, have invented a new and useful Fire-Escape, of which the following is a specification.

The invention relates to improvements in fire-escapes.

10 The object of the present invention is to improve the construction of fire-escapes and to provide a simple, inexpensive, and efficient one of a portable character adapted to be conveniently carried by a person and capable
15 of enabling him to readily descend from a building in the event of fire and to quickly detach the fire-escape, so that it will not be lost and may be used again.

20 The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

25 In the drawings, Figure 1 is a perspective view of a fire-escape constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is an enlarged detail view illustrating the arrangement of the parts of the securing device before the fire-escape is subjected to the weight of a person. Fig. 4 is a similar view after the fire-escape has been subjected to the weight of a person. Fig. 5 is a transverse sectional view of the fire-escape. Fig. 6 is a
35 detail view of the tubular casing.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

40 1 designates a pulley or drum composed of two sides 2 and a connecting hub portion, around which is wound a wire or cable 2^a, and the said pulley or drum is journaled in suitable bearings of a frame 3, preferably constructed of metal. The frame 3, which is
45 composed of two sides, is provided with upper and lower arms 4 and 5, diverging from the bearings 6 and connected at the top by transverse portions 7 and 8 and at the bottom by a horizontal portion or bottom piece 9.
50 The unreeling of the line 2^a is controlled by a band-brake consisting of a band 10, of steel, extending around the lower portion of the

pulley or drum and having one end attached to the transverse portion 7, which connects one pair of the upper arms 4, and its other end is secured to a brake-lever 11, fulcrumed at 12 adjacent to the point of attachment of the band 10 and providing a long arm 13, which extends to the opposite side of the pulley or drum. The brake-lever, which is composed of two sides, is substantially U-shaped in plan view, besides being connected by an end portion 14, to which is attached a wire 15, which extends to an operating-lever 16; but any other suitable connection may be employed between the levers. The brake-lever is provided near its center with a bend to enable it to clear the shaft or spindle 17, upon which the pulley or drum is mounted, and this shaft or spindle may consist of a bolt or any other suitable device.

The operating-lever, which is fulcrumed near one end between a pair of depending ears 19 at one end of the bottom piece 9 of the frame, has its shorter arm connected with the brake-lever, and it is adapted to exert sufficient power on the band-brake to stop the fire-escape at any point, if desired.

The short arm of the operating-lever has a support 19^a attached to it, and this support, which may be constructed in any suitable manner, preferably consists of a wire or cable provided with a loop 20, adapted to receive the foot of a person, and although the support is connected with the operating-lever at a point close to the fulcrum, yet the weight of a person is sufficient to apply the brake, so that he will gradually descend. The bottom of the frame forms a convenient grip for the operator, who may control his descent with one hand grasping both the grip and the lever 16, which is arranged within easy reach.

The free end of the line is connected with a plunger 21, arranged within a tubular casing 22 and provided at its lower end with an eye 23 for the attachment of the free end of the line, which is preferably provided with a loop or eye which is linked into the eye 23. The upper end of the plunger 21 is provided with a hook 24, which operates in and extends through a slot 25 of the tubular casing and is adapted to be engaged by one end of a short wire 26, which has its other end connected to the upper end of the tubular casing.

The wire 26, which forms a loop, is adapted to be placed around a portion of a bed or any other piece of furniture or a part of a building having sufficient strength to support the weight of a person, and the free end of the wire 26 is provided with an eye or link 27, which is adapted to be engaged with the hook. In setting the securing device or clutch the plunger is drawn downward against the action of a coiled spring 28 to the position illustrated in Fig. 3 of the accompanying drawings, and it is retained in such position by a trigger 29. The coiled spring which is disposed on the rod or plunger is interposed between the upper end of the same and the bottom of the tubular casing, and the trigger which sets the device is engaged with the lower end of the casing and is maintained in such position by the tension of the spring. The plunger has sufficient movement in a downward direction after the trigger is in engagement with the bottom of the casing to cause the said trigger to be drawn downward and disengaged when the fire-escape is subjected to the weight of a person. The trigger drops by gravity when the plunger is drawn downward by the weight of a person, so that after the person steps from the fire-escape or relieves the same of his weight the plunger will move upward in the casing under the influence of the spring to disengage the free end of the flexible loop from the hook. The casing is provided with an arm 30, located at the lower end of the slot and bifurcated to receive the hook, and the link or eye 27 is placed on the hook and arranged beneath the arm or projection 30, so that when the plunger moves upward after the fire-escape has been relieved of the weight of a person the hook will be withdrawn from the eye 27, thereby freeing the loop and permitting the fire-escape to be withdrawn from a building. One end of the shaft or spindle is provided with a crank-handle 31 to enable the pulley or drum to be readily rotated to wind up the line after the fire-escape has been used.

The invention has the following advantages: The fire-escape, which is simple and comparatively inexpensive in construction, is portable and adapted to be carried by a traveler or other person. It will enable him to descend readily from a burning building, and the fire-escape may be removed therefrom after it has been used. It is of compact form, and it may be constructed so that it can remain in a building for use when desired. The weight of a person operates the band-brake, so that the line will be unreeled slowly; but the fire-escape may be quickly stopped when desired. The hook forms a positive means for connecting the free end of the loop to the casing, so that there is no liability of its becoming accidentally unfastened while a person is descending.

Changes in the form, proportion, size, and the minor details of construction within the

scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

1. A fire-escape comprising a frame composed of two sides and a connecting bottom piece forming a grip, a pulley or drum journaled in the frame, a line connected with the drum, a brake, and an operating-lever for the brake fulcrumed on the frame and arranged adjacent to the grip, whereby it may be grasped simultaneously with the said grip, substantially as described. 70

2. A fire-escape comprising a frame composed of two sides having upper diverging arms connected at their outer ends, a pulley or drum journaled within the frame, a band-brake consisting of a band extending around a portion of the pulley or drum and having one end connected with the frame at one pair of the upper arms, a brake-lever composed of two sides, fulcrumed on the frame and connected with the other end of the band, an operating-lever connected with the brake-lever, and a line connected with the lever, substantially as described. 80 85 90 95

3. In a fire-escape, the combination of a casing, a plunger arranged within the casing and having a projecting portion, a flexible loop connected with the casing and adapted to engage the projecting portion of the plunger, a spring for actuating the plunger to disengage the projecting portion from the loop, and means for setting and tripping the plunger, substantially as described. 100

4. In a fire-escape, the combination with a line, of a flexible loop connected at one end with the line, a locking device for detachably connecting the other end of the loop with the line, and means for setting and tripping the locking device, substantially as described. 105

5. In a fire-escape, the combination of a casing having an arm or projection, a plunger mounted in the casing and having a hook, a loop having one end connected with the casing, its other end being adapted to engage the hook of the plunger, and means for setting and tripping the plunger to disengage the hook from the loop, substantially as described. 110 115

6. In a fire-escape, the combination of a casing having an arm or projection, a spring-actuated plunger mounted in the casing and having a hook arranged to extend over the arm or projection, a loop connected with the casing and adapted to engage the hook, and a trigger mounted on the plunger and adapted to engage the casing to hold the plunger extended, substantially as described. 120

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses. 125

JESSE Y. SHALLENBERGER.

Witnesses:

JOHN P. RICHARDS,
G. W. GILL.