(No Model.)

S. TAFT.

FIRE ESCAPE.

No. 459,228. Patented Sept. 8, 1891.

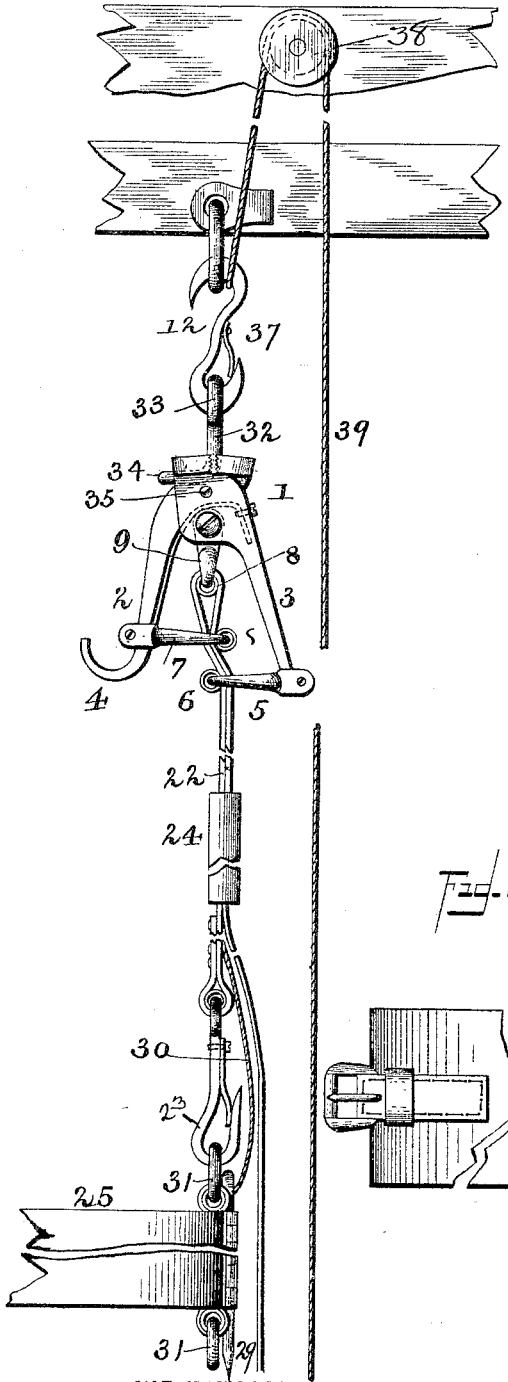


Fig. 2.

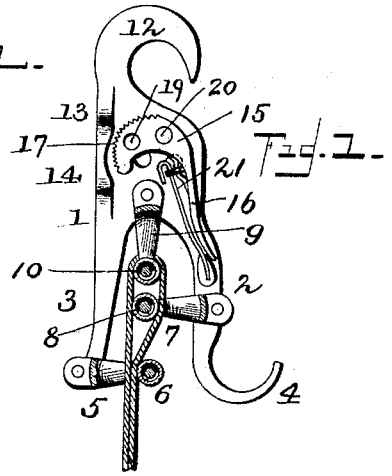


Fig. 1.

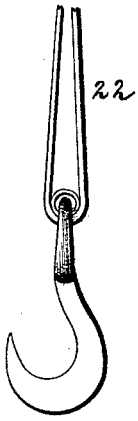
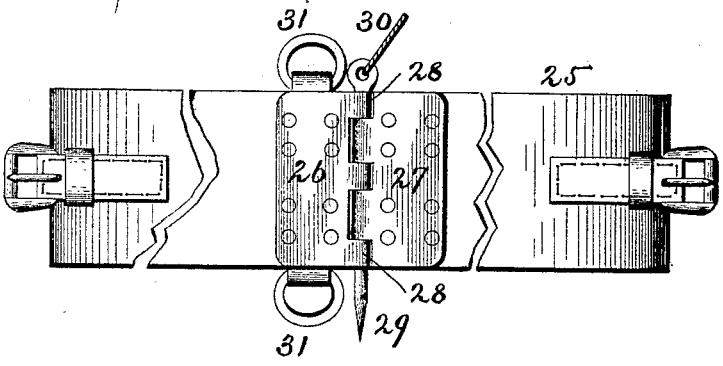


Fig. 3.



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UNITED STATES PATENT OFFICE.

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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 459,228, dated September 8, 1891.

Application filed March 5, 1891. Serial No. 383,859. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN TAFT, a citizen of the United States, and a resident of Millbury, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Fire-Escapes; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in fire-escapes, the object being to provide a safe, sure, and reliable device for rescuing persons from burning buildings.

The invention consists in the novel construction and combination of parts hereinafter fully described, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side view of the device. Fig. 2 is a similar view of the suspending clutch, showing a modified construction. Fig. 3 is a detail view of the belt-fastening.

In the said drawings, the reference-numeral 1 designates the suspending clutch, constructed of metal and having two depending legs 2 and 3. One of these legs has its free end formed into an outwardly-extending hook 4, and intermediate of its ends is provided with an inwardly-projecting loop 5, having a friction-sleeve 6. The other leg 2 is provided with a loop 7 and friction-sleeve 8, and the clutch-body is provided with a similar loop 9 and sleeve 10. The upper or opposite end of the clutch is provided with a hook 12, by which it may be suspended from a window. Near the upper end the clutch is provided with an outwardly-extending flange 13, having a curved recess 14.

The numeral 15 designates a lever pivoted to the clutch, having an arm 16 and an eccentric head 17, serrated or provided with teeth. This lever is provided with two or more pivot-holes 19, and the clutch-body is also provided with a plurality of holes or apertures, so that the pivot pin or bolt 20 can be changed so as to vary the distance of said lever from the flange 13.

The numeral 21 denotes a spring secured to the clutch-body at one end, while its other end is bent over, forming a hook which engages with a loop pivoted to the under side of the arms 16 of the eccentric lever. The tendency of the spring is to force the eccentric head of the lever toward the flange 13, and the purpose thereof will be hereinafter set forth.

The numeral 22 designates a strip of webbing of a length at least twice as great as the highest point from which the device is to be suspended or used, so that when doubled upon itself it forms two strands, each of which can extend to the ground. One end of the strip is passed through the loop 5, then through loop 7, up and through loop 9, around the sleeve 10, and then down through loops 7 and 5, being provided with a snap or other hook 23 to engage with the suspension-belt hereinafter described. Intermediate of the hook 23 and the clutch is a hand-hold 24, composed of a rubber and canvas tube which embraces both strands of the webbing, as shown.

The numeral 25 designates the suspension-belt, constructed of any suitable material, and is adapted to engage around the body of the person using the device underneath the armpits. The ends of the belt have securely attached thereto metal plates 26 and 27. The plate 26, intermediate of its ends, is provided with one or more loops 28, which engage between corresponding loops on the other plate 27, thus forming, as it were, two hinge-leaves, which are connected together by means of a pin or bolt 29, passing through said loops. This bolt is connected with a cord or tape 30, extending to the top of the building for a purpose hereinafter explained. The plates are also provided with pivoted loops 31 at top and bottom, with one of which the snap-hook on the end of the strip of webbing engages.

The operation is as follows: The clutch can be secured to a staple or other similar holding device by means of the hook 12. Some buildings, however, are provided with permanent vertical wires extending from top to bottom thereof in close proximity to the windows. In this case the clutch is secured to the wire by means of the flange 13 and the eccentric head of the lever 15, which bears against the wire and holds it firmly against said flange, thus securely holding the clutch.

The person using the device next places the belt around his body at a convenient point, secures it by means of the plates 27 and 28 and bolt 29, and then connects the same with the snap-hook of the webbing. He is then ready to descend, and he grasps the hand-hold and lets himself gently out of the window. He can descend gradually, either by compressing the hand-hold or by paying out slowly the slack of the webbing, or slide quickly by reversing the action. The descent can be controlled by the person using the device or by a person stationed at the window, or by any one on the ground below—in the latter cases the parties paying out the webbing. After a descent has been made the belt is released by withdrawing the securing-bolt, when the same can be returned to the window by pulling on the free strand of wire or the one attached to the belt. In the case of children, or when the party descending faints from fright, the effects of the fire, or otherwise, and there is no one upon the ground to release the belt, a party at the window can withdraw the bolt by pulling upon the cord connected therewith, and the device drawn up to the window to receive others.

In Fig. 2 I have shown a modified construction for attaching a looped arm to the clutch which can be connected with a hook by which the device is secured to a window-frame. In this case the two legs 2 and 3 of the clutch are pivoted together, their upper ends forming serrated jaws which grasp the arms 32, having loops 33 and bent portions 34. The numeral 35 designates the pivot-bolt passing through said legs and holding them together. 37 is the hook connected with the loop of said arm.

Secured to some convenient part of the building above the clutch is a pulley or sheave 38, through which passes a cord or twine 39, one end of which is connected with the hook 37 while the other reaches to the ground. By pulling upon this cord the clutch can be released from its fastening and lowered to the ground and saved.

Having thus described my invention, what I claim is—

1. In a fire-escape, the combination, with a clutch adapted to be secured to a building, having two downwardly-depending legs and loops and friction-sleeves, of a strip of webbing passed through said loops and doubled upon itself, forming two strands, one of which is provided with a hook, and a hand-hold, consisting of a flexible tube embracing said strands, substantially as described.

2. In a fire-escape, the combination, with the clutch having two downwardly-depending legs and loops and friction-sleeves, a flange having a curved recess, and a spring-actuated eccentric lever, of a strip of webbing passed through said loops and doubled upon itself, forming two strands, one of which is provided with a hook and a hand-hold, consisting of a flexible tube embracing said strand, substantially as described.

3. A suspension device for a fire-escape, consisting of a body portion having a flange with a curved recess, two depending legs, with loops and friction-sleeves, and a pivoted lever, said lever and body portion having a plurality of pivot-holes, substantially as described.

4. In a fire-escape, the combination, with a suspension device and a strip of webbing or other material connected therewith, of a belt adapted to be connected with said webbing, having end plates with loops, and a securing-bolt for engaging with said loops and provided with a securing-bolt, and a cord or tape connected therewith, substantially as described.

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

STEPHEN TAFT.

Witnesses:

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