

(No Model.)

W. O. RUTLEDGE.
FIRE ESCAPE.

No. 455,641.

Patented July 7, 1891.

FIG. 1.

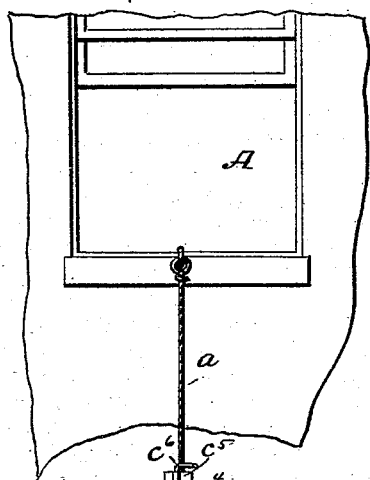


FIG. 2.

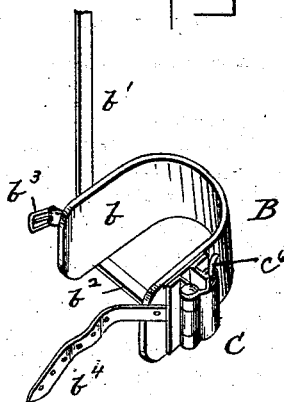


FIG. 3.

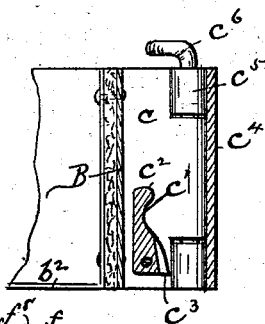


FIG. 4.

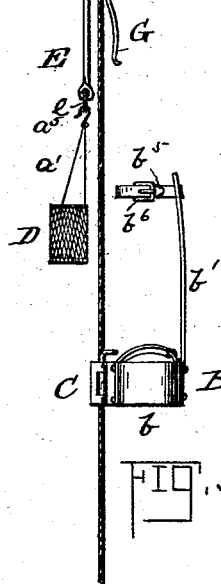


FIG. 5.

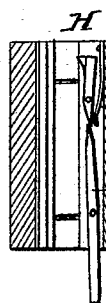
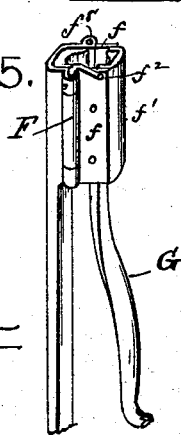


FIG. 6.

WITNESSES:

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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 455,641, dated July 7, 1891.

Application filed September 29, 1890. Serial No. 386,506. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM O. RUTLEDGE, a citizen of the United States, residing at Galveston, in the county of Galveston and State of Texas, have invented certain new and useful Improvements in Fire-Escapes; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The invention relates to improvements in fire-escapes of the class in which a rope forming part of the device has its upper end attached within a window or other opening of a building and is connected with apparatus to raise and lower an ascending fireman or other person escaping from the building; and it consists in the construction, arrangement, and novel combination of the parts herein-after described, illustrated in the drawings, and pointed out in the claims hereto appended.

In the accompanying drawings, in which similar letters of reference designate similar parts, Figure 1 represents a view of the device attached to the building. Fig. 2 represents a perspective view of the foot-rest or stirrup of the device. Fig. 3 represents a vertical section of the stirrup to show the dog therein. Fig. 4 is a similar section on another plane to show the grooved pintle. Fig. 5 is a perspective view of the hand-bar and hand-lever. Fig. 6 is a vertical section of the lower part thereof to show the rope-clamp therein.

Referring to the drawings by letter, A designates a window or other opening in the building, to a proper support within which the upper end of the rope *a* is securely attached, the said rope hanging from a window or from above the window when such a construction is desirable. If there is no one to hold it at the ground or no means of securing it thereto, it may hang loosely, although it is desirable to secure the said end, if possible, which gives it more steadiness.

B designates the stirrup, composed principally of the foot-yoke *b* and the metal leg and

foot bar *b'*. The foot-yoke *b* is preferably of sole-leather and shaped to conform to a person's heel, and the metal bar *b'* passes down vertically and is secured about centrally to the outer surface of one side of said yoke, and is thence bent transversely across the bottom of the yoke, forming the foot-rest *b²*, whence it is bent upward and firmly secured to the opposite side of the yoke. The stirrup is formed and adapted to be attached to the right foot and has on its outer or right corner a buckle *b³*, which engages a strap *b⁴*, attached to the opposite upper corner of the yoke, the said strap, when the stirrup is attached, passing over the instep of the right foot. The upper end of the metal bar *b'* is suitably slotted to have a leather strap *b⁵* pass therethrough, which has on one end a buckle *b⁶* and on the other end perforations for the tongue of the buckle, so that the strap *b⁵* may be secured around the right leg, or, if necessary, about both legs, the said strap *b⁵* passing around the leg below the knee, so that the man can stoop to disengage the pintle, hereinafter described. On the outer surface of the inner side of the yoke *b* is secured the hinge-joint C, having pivoted between its vertical plates *cc* a dog *c'*, which has a transverse rounded head *c²* at its upper end and is grooved at *c³* to permit the rope *a*, which passes through said joint, to pass when the stirrup is moved upward, the end *c³* binding on the rope when the stirrup attempts to descend.

c⁴ is a swinging leaf hanged to the edge of the vertical plate *c* of said joint and so formed at its free edge as to connect with the inner plate *c* by the knuckle *c⁵*. The said knuckle is vertically grooved to receive a pintle-pin *c⁶* on the free end of the swinging leaf *c⁴*, and which has its upper end bent horizontally, so that it can be lifted, thereby releasing said leaf and rendering the dog *c'* inactive.

E designates the hand-bar, having a ring *e* at its lower end for the hook *a⁵* upon the rope *a'* to pass through. At the upper end of said hand-bar is formed the two vertical plates *ff* of a hinge-joint F, which has a free swinging leaf *f'*, attached by the hinge *f³* to the edge of one of said plates, and can have its free edge attached to the edge of the opposite

plate f by a pintle-rod f^2 , grooved longitudinally, if desired, to receive a pin and prevent it falling out.

5 G is a hand-lever pivoted near its upper end within the lower portion of the leaf f' and with the end of its upper arm pressed outward on the lower end of the lower arm of a rope-clamp H , that is pivoted within the leaf f' , the rope passing between the leaves f and f' of the hinge-joint F . The said clamp has its upper end grooved to bite on the rope and is backed by a spring N , that throws it out of engagement when the hand-lever G is released. Thus a person can stop his descent 15 or regulate the same at any time by use of the hand-lever G .

A bag or net D of any suitable description may be attached to the hand-bar E by the rope a' , for the reception of articles or persons to be saved from the fire. 20

A person—such as a fireman—ascending into a building will bind the stirrup on his right foot and control the hand bar and lever with the left hand, the rope passing between the 25 legs. This, of course could be reversed; but as most people are right-handed it is the best construction. In ascending the person draws himself by the hand bar and lever, and when he releases them the dog c^2 in the stirrup prevents his falling. In descending with whatever weight he has the stirrup is released from the rope a by the disengagement of the 30 swinging leaf c^4 —that is, the operator stoops

over and pulls up the knuckle c^3 , which permits said leaf to swing open and prevents the dog c^2 from catching on the rope and controls his descent. It is thus evident that he can ascend or descend from a burning building rapidly and easily and can bring down with him in his descent persons who are in danger of the fire. 40

Having described my invention, I claim—

1. The combination, with a rope secured at its upper end within a building, of a hand-bar, hand-lever, and clamp, permitting a downward motion, and the stirrup and foot-rest permitting an upward motion only, substantially as specified. 45

2. The combination, with the rope a , of the hand-bar E , having hinge-joints at its upper end and provided with the swinging leaf f' , having within it the rope-clamp H , substantially as specified. 50

3. The combination, with the rope and hand bar and lever arranged to control or stop the descent, of the stirrup B , composed of the yoke b and leg and foot plate b' , and the hinge-joint c , provided with the pivoted dog c' and swinging leaf c^4 , substantially as specified. 55

In testimony whereof I affix my signature in presence of two witnesses. 60

W. O. RUTLEDGE.

Witnesses:

MACO LEE STEWART,
JNO. R. FULKERSON.