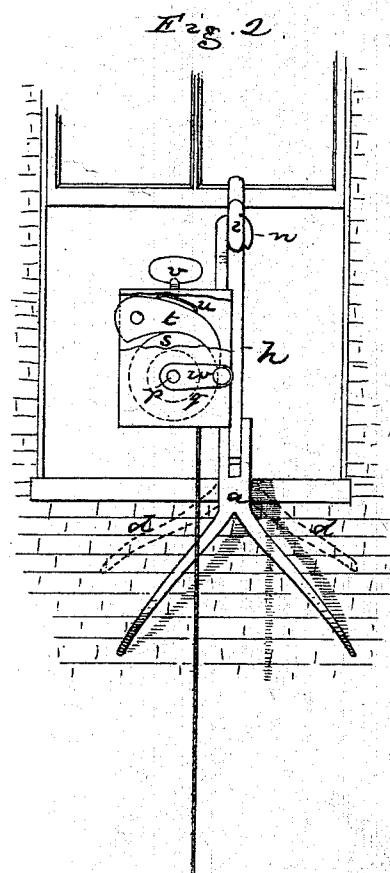
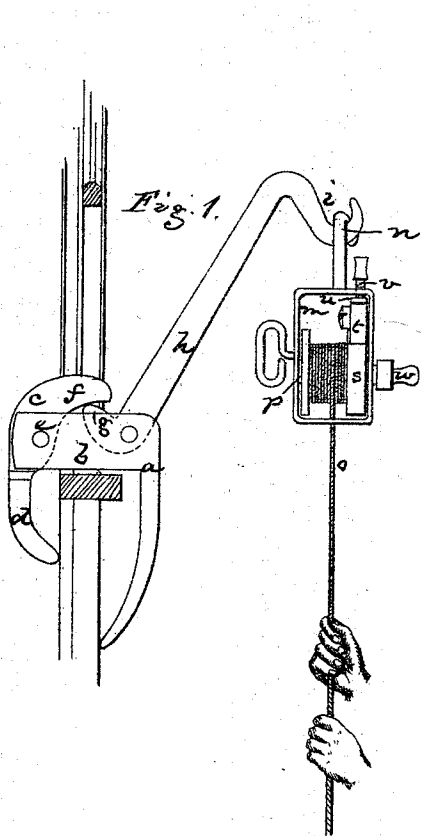


I. MERRITT.
Fire-Escapes.

No. 139,410.

Patented May 27, 1873.



Witnesses
 W. W. Frothingham.
 J. H. Latimer.

Inventor
 Ira Merritt.
 By his Atty.
 Crosby & Gould

UNITED STATES PATENT OFFICE.

IRA MERRITT, OF NORTH BRIDGEWATER, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND WILLIAM A. SWEETSER, OF SAME PLACE.

IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. 139,410, dated May 27, 1873; application filed May 6, 1873.

To all whom it may concern:

Be it known that I, IRA MERRITT, of North Bridgewater, in the county of Plymouth and State of Massachusetts, have invented an Improvement in Fire-Escapes; and I do hereby declare that the following, taken in connection with the drawing, which accompany and form part of this specification is a description of my invention sufficient to enable those skilled in the art to practice it:

The invention is designed to facilitate the escape of individuals from a burning building; and it consists of a peculiar clamp for attachment to a window-stool, and for holding a hook projecting beyond the front of the building, from which hook is suspended the escaping or lowering mechanism.

The drawing represents a mechanism embodying the invention.

Figure 1 shows the mechanism in side elevation. Fig. 2 is a front view of it.

a denotes a fork with widely-diverging prongs, which extend from a plate, *b*, to which is pivoted a lever, *c*, having widely-diverging prongs *d*, the lever being pivoted at *e*, and its arm *f* bending, as seen in Fig. 1, and having extending beneath it an arm, *g*, of another lever pivoted to plate *b*, and having an outwardly and upwardly extending arm, *h*, at the top of which is a hook, *i*. When this clamp is to be used, the fork *a* is placed outside of and below the window, and the fork *d* inside of and below the window, and when any downward stress is then brought upon the hook the lever *c* tightens the hold of the inner fork, and the weight the hold of the outer fork, so that by the compound strain the clamp is firmly secured, it being applied without skill and almost instantly. From the hook is suspended the lowering mechanism. This mechanism is partly contained in a case, *m*, which case may be suspended from the hook *i* by a hook, *n*, or by the rope *o*, or a hook attached to the rope. Within the case and journaled in the walls thereof is a shaft,

p, having a barrel, *q*, upon which is wound the rope *o*. On said shaft or barrel are two heads, and the head *s* forms a wheel for the pressure of a brake, *t*, pressed down by a spring, *u*, the stress of which is regulated by a thumb-screw, *v*. On the end of the shaft *p* is a winch, *w*. When a person is to escape, and a fireman or any other person is at the window to aid, the person grasps the end of the rope, or has it fastened to him, and then the party above lowers him down by, or controls his descent by, means of the winch *w*. When no one is at hand to aid, the escaping person fastens the end of the rope to the hook, and fastens himself to the case *m*, and, tightening the screw *v* to prevent too rapid descent, swings off, and, grasping the winch, allows it to turn fast enough to graduate his descent or prevent his too rapid descent. As the rope or the case always remains fastened to the hook, the escape can be used by any number of persons one after another.

The escape mechanism being at hand, either kept in a building or brought for a rescue, as exigency may require, it will be obvious that the whole rigging may be brought into operation in a very short time, and used to great advantage in preventing loss of life.

I claim—

1. The clamp, having the fork *a*, plate *b*, fork-lever *c*, and hooked lever *h*, all constructed and arranged substantially as shown and described.

2. In connection with such clamp, the suspended case *m* containing the hook *n*, the shaft *p* and its winch *w*, the barrel *q*, the wheel *s*, brake *t*, spring *u*, and screw *v*, arranged and operating substantially as described.

Executed this 22d day of April, A. D. 1873.

IRA MERRITT.

Witnesses:

SOLOMON LEIGHTON,
LEONARD J. GOODRIDGE.