

(No Model.)

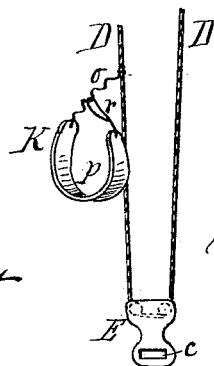
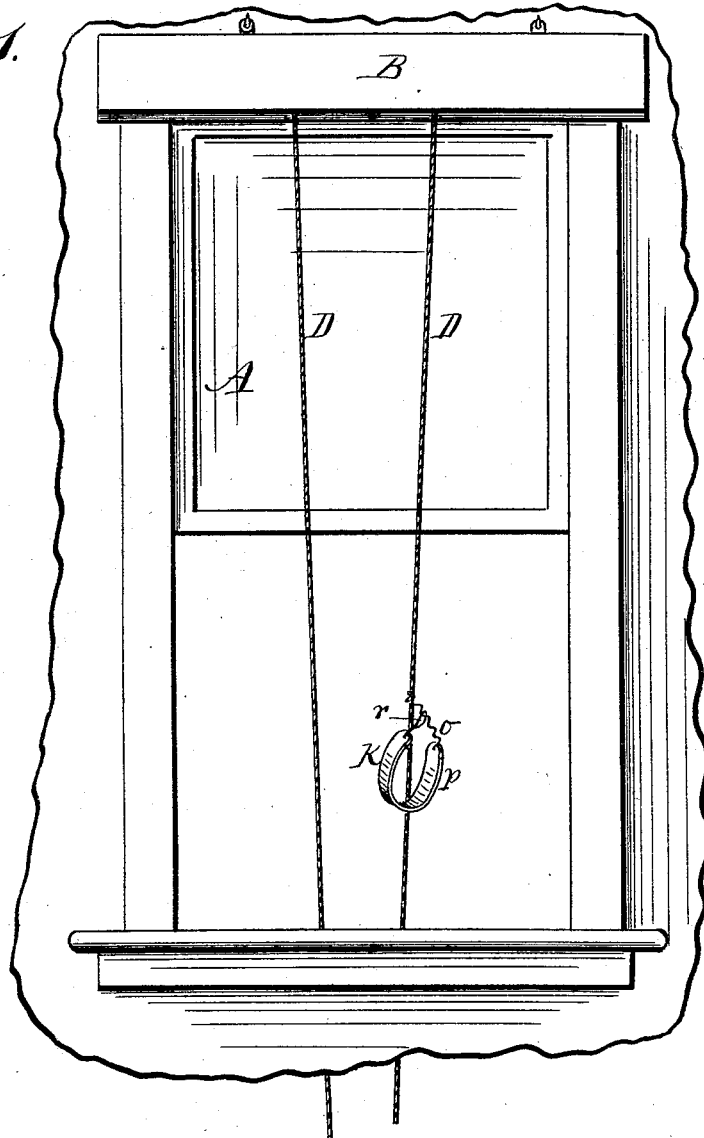
2 Sheets—Sheet 1.

V. H. FELT.
FIRE ESCAPE.

No. 493,490.

Patented Mar. 14, 1893.

Fig. 1.



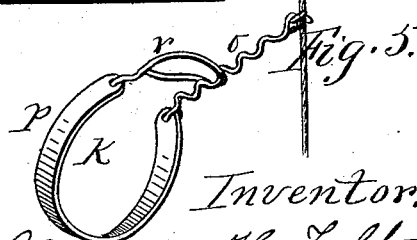
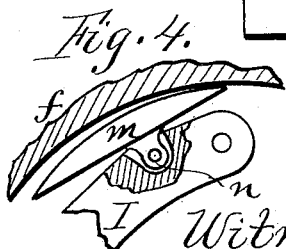
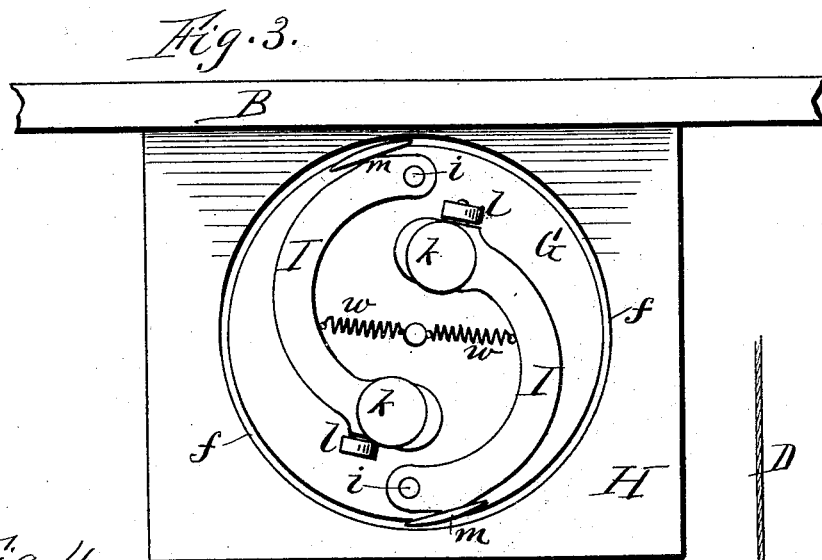
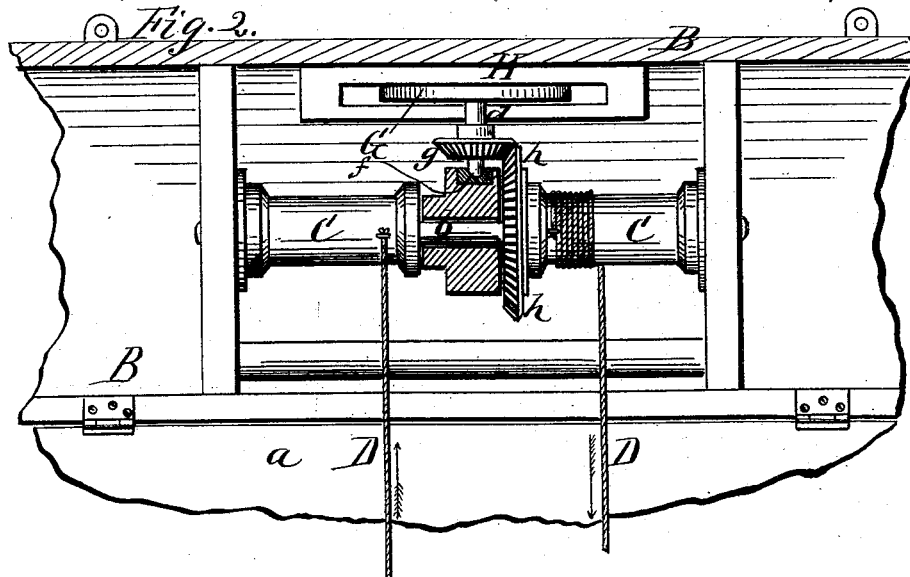
Witnesses.
F. B. Hutchinson
P. A. Gertrich

Inventor
Vanderlyn H. Felt,
per R. F. Osgood,
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No. 493,490.

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Witnesses.
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UNITED STATES PATENT OFFICE.

VANDERLYN H. FELT, OF KENDALL, NEW YORK, ASSIGNOR OF ONE-HALF
TO CHARLIE D. JONES, OF SAME PLACE.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 493,490, dated March 14, 1893.

Application filed June 6, 1892. Serial No. 435,763. (No model.)

To all whom it may concern:

Be it known that I, VANDERLYN H. FELT, of Kendall, in the county of Orleans and State of New York, have invented a certain new and useful Improvement in Fire-Escapes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this specification.

My improvement relates to that class of fire escapes in which a cord is attached to a windlass and the person is lowered by means of a sling attached to the cord.

The object of my invention is to combine with the apparatus a governor of a peculiar kind by means of which the descent is controlled automatically.

The invention consists in the construction and arrangement of parts hereinafter described and claimed.

In the drawings—Figure 1 is an elevation of a window, looking on the inner side, showing the apparatus attached at the top of the window, and the cord or cable connected therewith extending out through the window and reaching to the ground. Fig. 2 is an enlarged sectional elevation looking in front and showing more particularly the windlass apparatus. Fig. 3 is an enlarged plan view of the governor and the opening or socket in which it rests. Fig. 4 is a fragmentary view showing one of the brake shoes of the governor and its connections. Fig. 5 is a perspective view of one of the slings.

A indicates an ordinary window in a building.

B is a receptacle that contains the operating devices, said receptacle being hung over the top of the window on the inner side by means of hooks, screws, or other devices. This receptacle is simply a box provided with a hinged cover *a*, at its bottom, held closed by means of a hook or other attachment, so that the cover can be opened at any time to allow the escape cord to be lowered.

C C are two spools or drums within the receptacle, forming a double windlass, being attached to the same shaft *b* and revolving together in the same direction.

D is the cord or cable. It is doubled, the loop extending downward and the free ends

being attached respectively to the two spools C C. These ends are attached and wind reversely on said spools, so that as one end is wound up the other is correspondingly unwound.

E (Fig. 1) is a weight at the lower end of the cord, provided with two pulleys around which the looped end of the cord passes. This weight serves to keep the cord extended and it is provided with a hand hold *c*, by which it can be seized to draw the lower end of the cord away from a burning building while a person is descending. The pulleys on the weight allow the cord to run while the weight keeps its place.

G is the governor, consisting of a wheel that is attached to a vertical shaft *d*, and runs within a circular opening *f* of a fixed plate H. On the short shaft *d* is a bevel pinion *g*, that engages with a bevel wheel *h*, attached to the spool shaft *b*. By this means when the spools are turned rotary motion is imparted to wheel G.

I I are two arms, pivoted at *i i* to the top of the wheel G, and provided at the opposite ends with weights *k k* and friction wheels *l l*. When the wheel is rapidly revolved the tendency is to throw the weighted ends outward by centrifugal action. The friction wheels facilitate the movement.

m m are brake shoes pivoted at *n n* to the arms near the pivots of the latter. The outer faces of the shoes are convex to fit the concave face of the opening *f* when the shoes are thrown out.

K K are the slings by which a person can attach himself to the escape cord D. Two of these are used attached to the opposite sides of the cord, one at the top and the other at the bottom. Each consists of a corrugated rod or wire *o* attached to the cord, a flexible strap or band *p* attached to the rod, and a loop *r* at the opposite end which passes around the corrugated rod as shown in Fig. 5.

When the device is not in use the cord is drawn up and stored in the receptacle. In case of fire the cover *a* is opened and the cord let down. The person then attaches himself to the cord by means of the sling before described. The corrugations in the rod *o* enable the band to be drawn up and adjusted to the

person. The operator then swings free and allows himself to run down. The weight gives motion to the spools and the latter gives motion to the governing wheel G. When the motion becomes too rapid the centrifugal action throws out the arms I I, bringing the brake shoes *m m* in contact with the sides of the opening *f*, thereby applying friction to retard the motion. When the motion is sufficiently retarded the springs *w w* draw the arms back, releasing the contact of the brakes and the cord runs free again. By this means the action is automatic and the descent under perfect control. The running down of one sling brings the other one up in position for use.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a fire escape, the combination of the spools C C, the cord D attached thereto to wind and unwind in reverse directions, the wheel G resting in the opening *f*, the gears *g h* connecting the wheel with the spools, and

brakes connected with the wheel, thrown out by centrifugal action and retracted by springs, as described.

2. In a fire escape, the combination of the spools C C, the cord D attached thereto to wind and unwind in reverse directions, the wheel G resting in the opening *f*, the gears *g h* connecting the wheel with the spools, the pivoted arms I I, the shoes *m m* jointed to said arms, and the reacting springs *w w*, arranged to operate in the manner and for the purpose specified.

3. In a fire escape the combination, with the cord D, of the corrugated rod *o*: the flexible strap *p*, and the loop *r*, arranged to operate in the manner and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

V. H. FELT.

Witnesses:

R. F. OSGOOD,
A. W. WILBUR.