(No Model.)

J. DITTRICK.

FIRE ESCAPE.

No. 326,726. Patented Sept. 22, 1885.

Fig. 1.

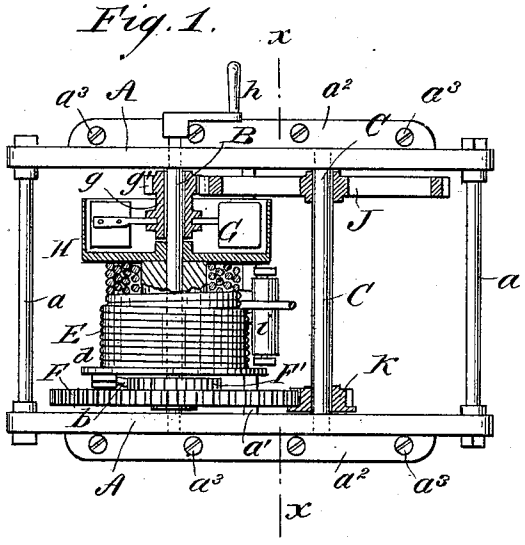


Fig. 2.

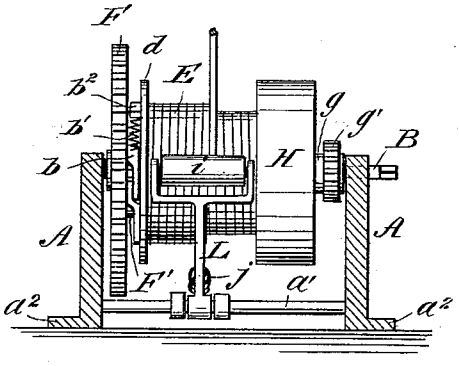


Fig. 3.

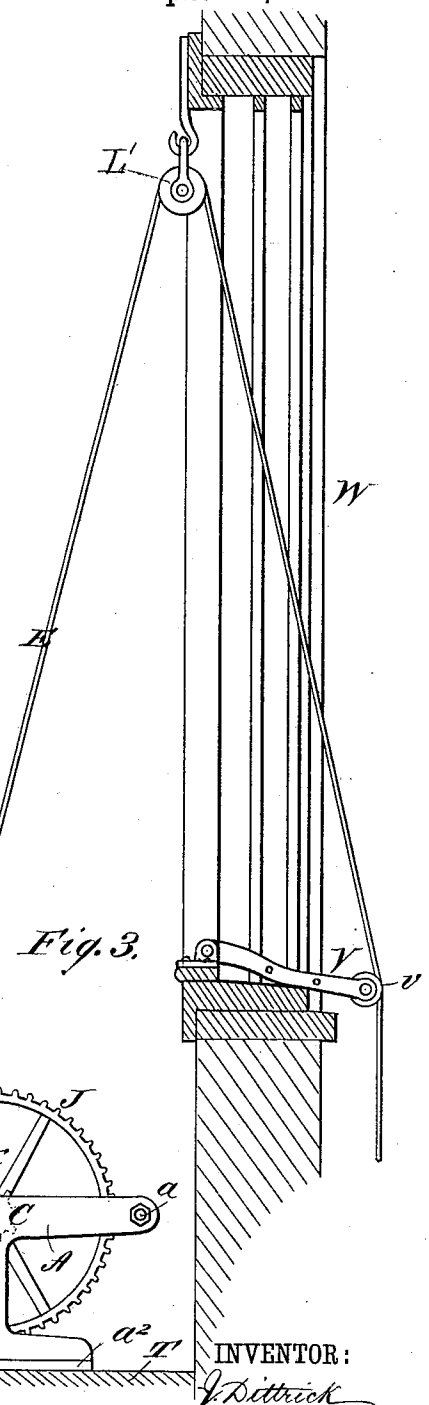
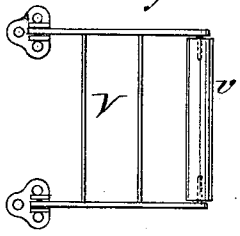
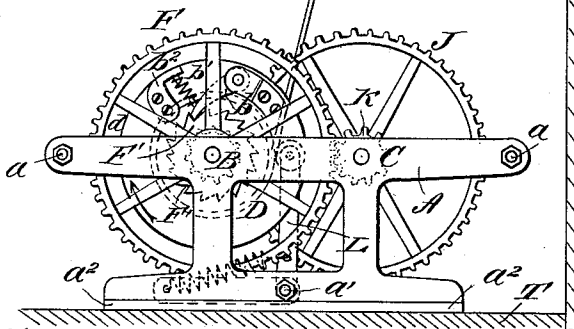


Fig. 4.





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JOHN DITTRICK, OF SMITH'S FALLS, ONTARIO, CANADA.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 326,726, dated September 22, 1885.

Application filed June 25, 1885. (No model.)

To all whom it may concern:

Be it known that I, JOHN DITTRICK, of Smith's Falls, in the county of Lanark, in the Province of Ontario and Dominion of Canada, have invented a new and Improved Fire-Escape, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view, partly in section, of my new and improved fire-escape. Fig. 2 is a transverse sectional elevation of the same on the line *x x* of Fig. 1. Fig. 3 is a side view of the fire-escape placed in a building near a window in position for practical use, and Fig. 4 shows the guard-roller frame.

The invention will first be described in connection with the drawings, and then pointed out in the claims.

A A represent two side plates bolted together by bolts *a a a'*, to form the frame of the fire-escape. The said plates A are formed with flanges a^2 at their lower edges, through which bolts or screws a^3 pass for securing the fire-escape to the floor T near the window W, as shown clearly in Figs. 1 and 3. There are two shafts, B C, journaled in and between the side plates, A A. On shaft B, which is a crank-shaft, is secured the drum D, on which the descending-rope E is wound. Upon the shaft B, near the end or head *d* of the drum D, is placed loosely the large gear-wheel F. This is formed or provided with the ratchet-wheel F', which is next to the head *d* of the drum D. A pawl, *b*, is pivoted to the head *d* of the drum, which pawl is held in contact with the ratchet-wheel F' by the spring *b'*, placed between the projection b^2 on head *d* and the pawl, as shown in Fig. 3, so that when the drum D is revolved by the drawing off of the rope E, the wheel F, ratchet F', and shaft B will also be revolved by and with the drum. Upon said shaft B is also placed loosely the fan G, and this is inclosed by the circular casing H, fixed upon the shaft B. The hub *g* of the fan G is formed with the small gear wheel or pinion *g'*, with which meshes the large gear-wheel J, which is fixed upon the shaft C near one of its ends. Near the other end of the shaft C is secured the small gear wheel or pinion K, which meshes with the large gear-wheel F of shaft B, so that when this gear-wheel F is revolved by the drawing off of the rope E, as above described, the shaft C will be revolved, and through it and the gear-wheels J *g'* the fan G will be rapidly revolved, so that it will act as a governor, to prevent too rapid running off of the rope E.

To wind the rope E upon the drum D, the shaft B must be revolved by the crank *h* in the direction of the arrow, Fig. 3, which, owing to the pawl and ratchet *b* F', can be done without revolving any of the gearing.

In order to prevent any slacking of the rope E when wound upon drum D, I hinge or pivot upon the rod *a'* the arm or frame L, which is provided at its upper end with the roller *i*, (preferably of rubber,) and held drawn toward the drum D by the coiled spring *j*, so that the roller presses against the rope and acts as a guide in winding up the rope, and also as a keeper to prevent slack, as mentioned. The rope E passes from the drum D up over the pulley L', secured at the top of the window W, so that in use a person to descend has simply to attach himself to the rope and swing out of the window, when his weight upon the rope will draw it off from the drum with a slow movement, governed by the fan G, so that the person will descend slowly to the ground or pavement entirely without danger of injury. If two or more persons are to descend, the rope E must be wound upon the drum D by turning it with crank *h* after the descent of each person. The rewinding of the rope upon the drum D can be quickly and easily done, as none of the gearing revolves with the drum or shaft B while being turned for this purpose.

To prevent the person descending from striking the outside of the wall of the building and to prevent the rope from chafing upon the window-sill, I employ the frame V, (shown in Figs. 1 and 4,) which is hinged to the window-sill, and provided with roller *v*, and adapted to be tipped outward, as shown in Fig. 1.

The frame is wider than the window-sill, so that the roller is held beyond the wall, so the rope E runs against the roller, which prevents chafing and holds the rope away from the wall, as clearly illustrated in Fig. 1.

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

1. The drum D, provided with pawl *b*, and

attached to shaft B, the fan G and gear-wheel F, placed loosely on the shaft B, the gear-wheel F being provided with the ratchet F′, the fan with gear-wheel g', in combination with the shaft C and gear-wheels K J, secured thereon, meshing, respectively, with the gear-wheels F and g', substantially as and for the purposes set forth.

2. The combination, with the supporting-frame A and the drum D, journaled therein, and adapted to have the rope E wound thereon, of the frame L, pivoted to the frame and having a forked upper end, the roller i, journaled in the forks of the said frame, and the spring j, having its ends attached to the supporting-frame and to the roller-carrying frame, substantially as herein shown and described.

JOHN DITTRICK.

Witnesses:
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