(No Model.)

F. W. EMONS.

FIRE ESCAPE.

No. 337,940. Patented Mar. 16, 1886.

FIG. 1.

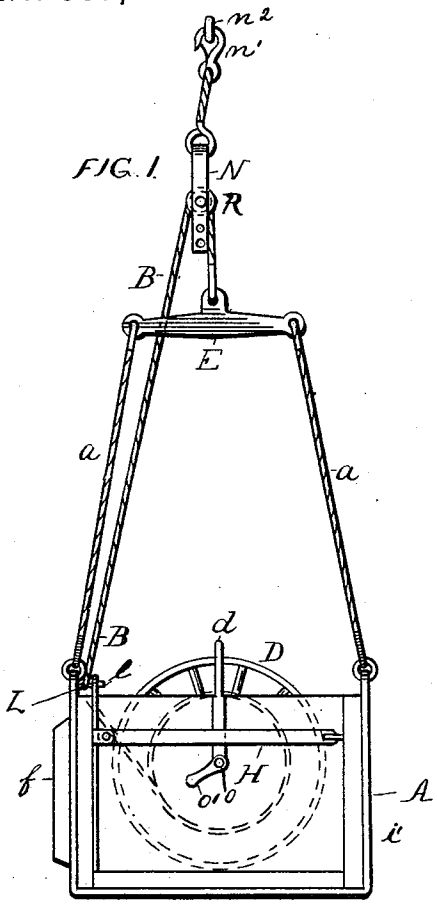


FIG. 2.

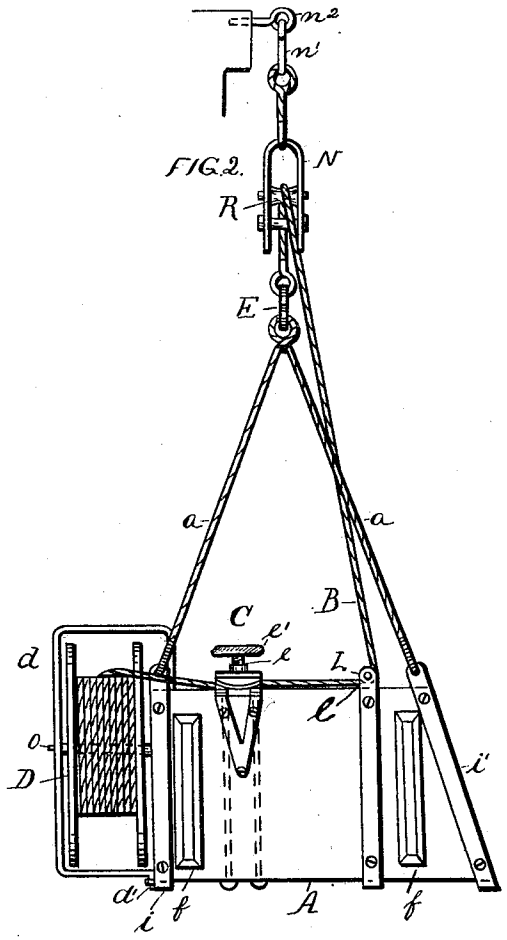


FIG. 3.

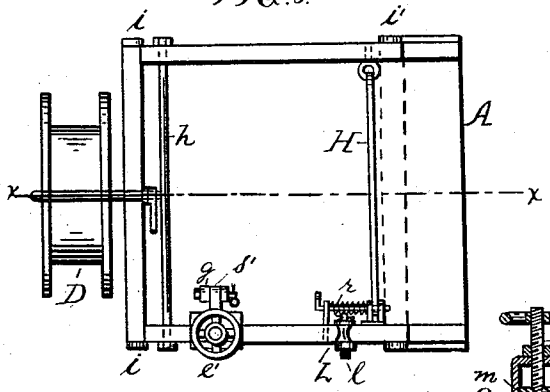


FIG. 4.

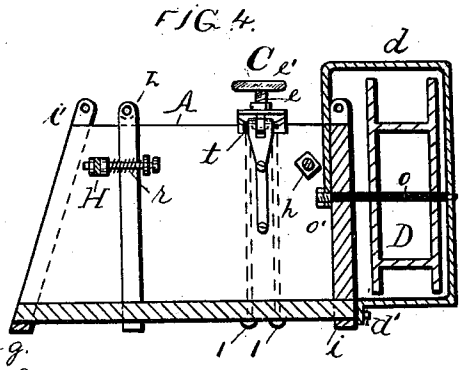
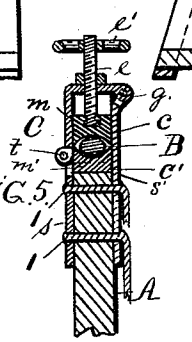


FIG. 5.



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UNITED STATES PATENT OFFICE.

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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 337,940, dated March 16, 1886.

Application filed June 6, 1885. Serial No. 167,813. (No model.)

To all whom it may concern:

Be it known that I, FOWLER W. EMONS, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention has reference to improvements in fire-escapes; and the invention consists in providing the support for the escape basket or car with a yoke, which is also supplied with a concave roller, over which passes the operating-rope of the car. The car is also provided with a brake, through which the said operating-rope of the car passes, and thereby forms the means by which the descent of the car is regulated. A detachable reel located upon one side of the car furnishes the quantity of rope needed to complete the descent, and fenders or guards placed on the side of the car keep the same from coming in contact with the building.

In the accompanying drawings, Figure 1 is a front view of my improved fire-escape, showing the reel attached, upon which the loose part of the operating-rope is wound. Fig. 2 is a side view thereof. Fig. 3 is a top or plan view of the car and reel. Fig. 4 is a cross-section of the car on line *x x* of Fig. 3. Fig. 5 is an enlarged vertical section of the brake.

Similar letters refer to similar parts.

In the drawings, A represents a car or basket in which the person or persons operating the fire-escape ride, and which is connected by fixed ropes *a* or other suitable connections to each end of the beam E. A yoke, N, depending from the snap-hook *n'*, is provided with a concave pulley-wheel, R, over which passes the supporting and operating rope B, and which is connected centrally to the beam E. After passing over the concave roller R, thence downward and under a guide-roller, L, secured in a suitable position on one of the sides of the car or basket A, it passes through the pinch-brake C, which is also secured upon the same side of the car A as the guide-roller L.

The brake C, through which the operating support-rope B passes, is constructed in two parts, *c* and *c'*, in which are located blocks *m* *m'*, to form jaws, the opposite or biting edges of which are curved to better grip the rope. The upper jaw, *m*, is adjusted to and from the block *m'* by a set-screw, *e*, passing through a threaded aperture in the cap of the part *c* and swiveled in the end of the block. The part *c* is hinged to the strap *s* of the part *c'* which latter consists of the parts *s* and *s'*, secured together by bolts 1, which pass through the parts and the side of the car. These bolts are bent at right angles and extend downward on the inside of the car and pass through its bottom, as more clearly indicated in Figs. 2 and 4. By this arrangement the greater part of the weight and strain of the rope B is removed from the side of the car and transferred to its bottom. The keeper *g* forms the means for holding the swinging cap-piece *c* by the additional use of the locking-pin *t*.

The swinging gate-bar H and the stationary stay-bar *h* are for rigidly bracing and holding the sides of the car A and preventing their inward or outward movement when subjected to pressure from without or within, as the case may be. This arrangement becomes necessary, as one end of the car is open, to better facilitate the ingress and egress of persons to the car. The swinging gate-bar H also serves as a guard in keeping the occupants of the car from falling out when operating the device, and a spring-catch bolt, *r*, is withdrawn when wishing to swing the brace and gate-bar up for any purpose whatever.

The guide-roller L, under which the rope B passes when lowering the car A, is removable by withdrawing the pin *l*, and the upper part or jaw, *c*, of the brake C is also hinged, as described, thus allowing the full escape of the operating and support rope B, which will admit of the elevating of the car A by simply pulling upon the rope B, which is directly over the concave pulley-wheel R.

Guards or fender-pieces *f f* are secured in any well-known manner to the side of the car A, to prevent any portion of the latter from striking the building in its descent and provide for the free use of the brake C.

The reel D is detachable, and is held in position by means of the support *d*, through which its axle *o* passes and receives a bearing at its rear end, the front end of which also re-

ceives a bearing in the support *d*, within the rear wall of the car A, and is secured by the hand-nut *o'*. The bottom end of said support *d* enters a keeper, *d'*, secured to the rear of the car beneath the reel D.

In operating the device the depending yoke N is connected at its upper end preferably to a snap-hook, *n'*, which engages an eye, n^2, secured in the upper sill of the window or door, either upon the inside or outside of the building, and when the reel D is used in connection with the car the operating support-rope B will be in its proper place over the pulley-wheel R, under the guide-roller L, and through the brake C, so that the car can be secured flush with the window or door sill, to admit of being quickly entered by those to descend, so that the engaging of the snap-hook *n'* with the stationary eyebolt n^2 is all the preparation necessary for the descent. The speed at which the car descends is at all times under perfect control of the occupant or occupants of the same by the use of the brake C, by turning the swiveled screw *e* by means of the hand-wheel *e'*, thus binding or unbinding the rope B between the jaws *c* and *c'*. When the descent is completed, the roller L can be quickly removed by withdrawing the pin *l*, and the upper portion, *c*, of the brake C swung upward by removing the pin *t*, thus entirely freeing the rope B, and should it then be desirable the car can be quickly drawn up to its original position on the building, the rope replaced under the guide-roller L and through the brake C, and another descent effected in the same manner.

When not in use, all of the attachments can be placed within the body of the car, and the whole arrangement can be conveniently placed in any portion of the room, as it will occupy but a small amount of space when not in use.

All of the parts can be firmly and durably made, thus presenting nothing to get out of order, always ready for use in the shortest time, and can be operated by a single individual, the speed at which it is desirable to descend being always under immediate control.

Having thus described my invention, I claim as new the following:

1. The combination, with the car, of a friction-brake consisting of the straps *s s'*, oppositely placed on a side of the car, bolts 1, passing through the side of the car and the straps, and extending downward within the car and projected through its bottom, the cap *c*, hinged to the strap *s'* on one side and secured to the strap *s* by a keeper, blocks *m m'*, the one located within the cap *c*, the other between the ends of the straps projecting beyond the edge of the car, and a set-screw to adjust the block *m* to and from the block *m'*, substantially as and for the purpose specified.

2. The combination of the car open at one end and closed at the other, a reel secured to the closed end, the brake C, fastened to one side, the supporting-ropes *a*, beam E, operating-ropes B, stay-bar *h*, the gate-bar H, hinged to one side of the car and extended across the open end, and the spring draw-bolt *r*, to lock the free end of the bar when in position, as and for the purposes set forth.

3. The combination, with the car, of a reel, a support, *d*, the reel-shaft securing the support to the car by passing through its side and one of its ends, and a keeper securing the other end of the support to the bottom of the car, substantially as described.

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

FOWLER W. EMONS.

Witnesses:

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G. W. KUCKER.