R. J. MACDONALD.

FIRE-ESCAPE.

No. 192,176. Patented June 19, 1877.

Fig. 1.

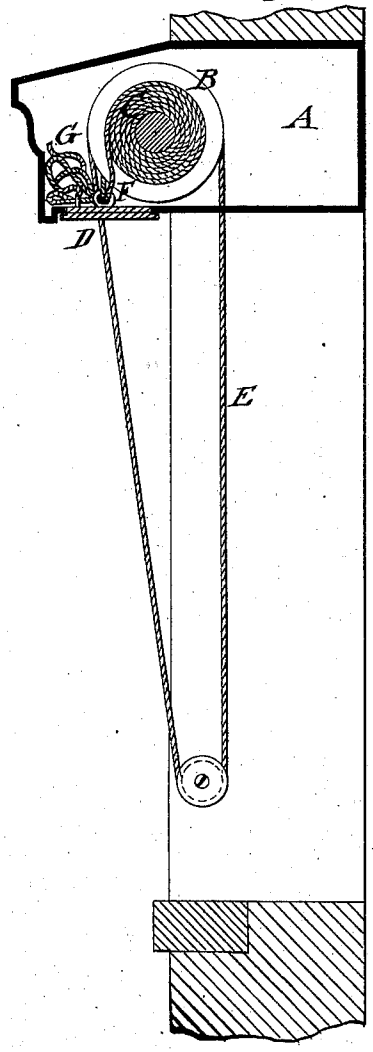


Fig. 2.

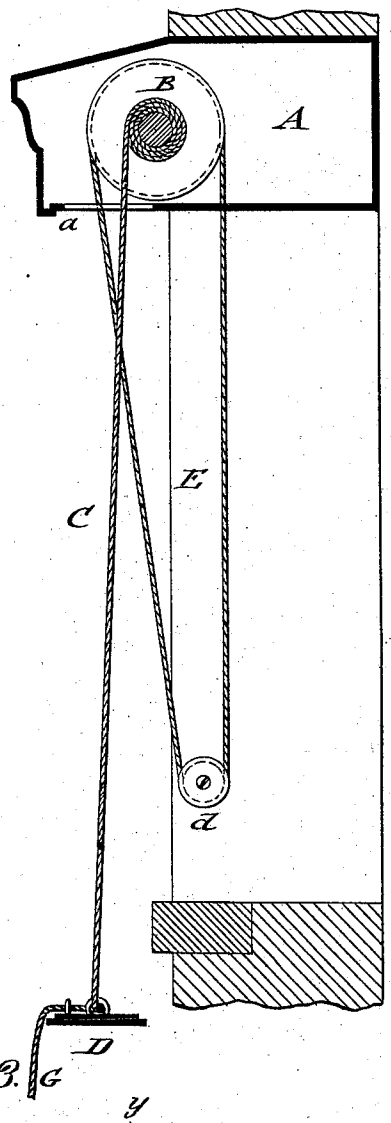
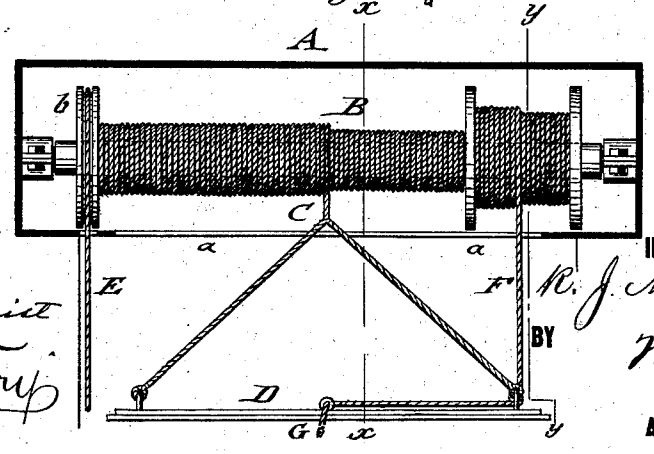


Fig. 3.



WITNESSES:

H. Ridgwell

A. F. Terry

INVENTOR:

R. J. Macdonald.

BY

ATTORNEYS.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

RICHARD J. MACDONALD, OF NEW YORK, N. Y.

IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. **192,176**, dated June 19, 1877; application filed May 5, 1877.

To all whom it may concern:

Be it known that I, RICHARD J. MACDONALD, of the city, county, and State of New York, have invented a new and Improved Fire-Escape, of which the following is a specification:

In the accompanying drawing, Figures 1 and 2 represent vertical transverse sections of a window casing and cornice or cap with my improved fire-escape, respectively, on lines *x x* and *y y*, Fig. 1; and Fig. 3 is a sectional side view of the same.

Similar letters of reference indicate corresponding parts.

The invention relates to a fire-escape for hotels, tenement-houses, and other buildings, by which an easy and convenient means of escape from the danger of fire is provided, and the entire apparatus neatly stored out of sight, and at a moment's notice ready for use.

The invention consists of a hollow cornice or cap above the top of the window-casing, which is provided with a bottom aperture closed by a movable seat, that is raised or lowered by a drum and suspension-cord, in connection with a lowering-cord and drum and an endless tension-cord and pulleys for hoisting or lowering the seat.

In the drawing, A represents a hollow cornice or cap of suitable size, arranged above the top part of the window-casing. At the inside of the cap is a drum or roller, B, on which is wound up a cord or rope ladder, C, to which, by two or more suspension-cords, a seat, D, is attached, that closes, when the fire-escape is not required for use, the bottom opening *a* of the cap A, as in Fig. 1. The drum B turns in suitable bearings of the cap, and has at one end a pulley, *b*, for a second endless cord, E, and at the other end a separate drum or roller section, on which a third cord, F, is wound up. The endless cord E passes from the end pulley of the roller through perforations of the casing to a pulley, *d*, at the side of the window-casing, the cord being tightly stretched on the pulleys, so as to readily lower or raise the seat or board D from its position on the casing or up to the same. The tension of the endless cord is adjusted in such a manner that the same acts as a brake.

When the seat is lowered down to the window-sill the person lowering the same takes place thereon, and lowers himself by pulling at the cord F so as to overcome the friction of the endless cord. The roller B unwinds thereby the suspension-cord C until the party arrives on the ground. The escape may then be hoisted again by the endless cord and used by the next person, the same lowering the seat by pulling at the cord F. The hoisting of the seat winds up the suspension-cord C and the lowering-cord F, and renders the escape ready for use for the next person.

A cord, G, is attached to the seat, of sufficient length to reach the ground, for the purpose of steadying the motion of the seat or pulling the same off the wall of the building, in case the flames or smoke should issue from windows of the lower stories. This drop-cord G is stored above the seat in the cap, which incloses the entire apparatus when the seat is brought into position to close the bottom opening of the same, with the exception of the endless cord at the jamb of the casing. The apparatus is thus stored out of sight, but instantly ready for use, forming an effective and reliable means of escape from the windows of upper stories of buildings of all kinds, which should be arranged in several windows of each story, so as to be available for escape. It will also answer for all the floors below the top floor, so as to require but a few escapes in each building.

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

A fire-escape consisting of cornice A, roll B, rope ladder C, seat D, cords E F, and pulley *d*, arranged substantially as shown and described.

RICHARD J. MACDONALD.

Witnesses:

PAUL GOEPEL,

C. SEDGWICK.