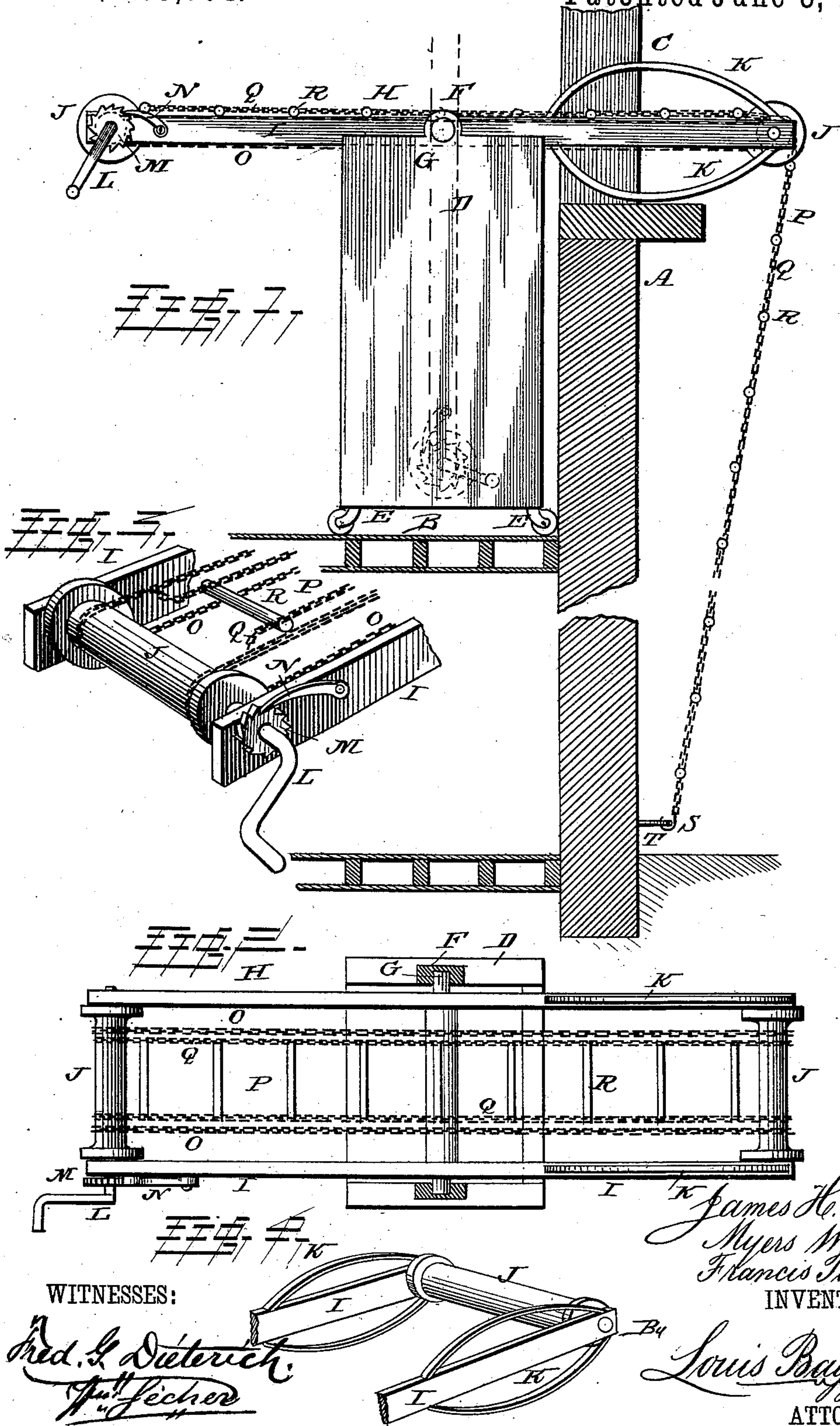


(No Model.)

J. H. ELLIS, M. WILSON & F. TANNER.  
FIRE ESCAPE.

No. 299,764.

Patented June 3, 1884.





# UNITED STATES PATENT OFFICE.

JAMES HOWARD ELLIS, MYERS WILSON, AND FRANCIS TANNER, OF  
WALKERVILLE, ONTARIO, CANADA.

## FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 299,764, dated June 3, 1884.

Application filed March 11, 1884. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES HOWARD ELLIS, MYERS WILSON, and FRANCIS TANNER, residents of Walkerville, in the county of Essex, Province of Ontario, and Dominion of Canada, have invented certain new and useful Improvements in Fire-Escapes; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a vertical sectional view of a building provided with our improved fire-escape, showing the apparatus in side view. Fig. 2 is a top view of the apparatus, and Figs. 3 and 4 are perspective detail views of the ends of the reel-frame.

Similar letters of reference indicate corresponding parts in all the figures.

Our invention has relation to that class of fire-escapes adapted to be kept within the house and to be let down through a window or other opening in the wall when used; and it consists in the improved construction and combination of parts of the same, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates the wall of a building; B, one of the floors, and C a window. A casing, D, mounted upon casters E, and somewhat wider than the window, incloses the apparatus when not in use, and may be placed in any part of the room and be rolled to the window when it is to be used. The upper edges of the sides of the casing form bearings F, in which rock trunnions G, projecting laterally from the parallel side pieces of a frame, H, in the ends of which side pieces, I, two rollers or reels, J, are journaled. The frame rocks upon the trunnions, and may, when not in use, be tilted upward, one side of the casing being either open or provided with a removable door, while, when in use, it is tilted into a horizontal position, the front of the casing bearing against the inner side of the wall and the outer end of the rocking frame bearing with the lower pair of two

pairs of curved rods, K, upon the sill of the window. These curved rods are secured upon the upper and lower edges of the side pieces of the frame at its outer end, and the lower rods bear against the window-sill, while the upper rods serve as handles for the persons passing over the outer end of the frame down upon the ladder. The inner reel is provided with a crank, L, by means of which it may be turned, and is also provided with a ratchet-wheel, M, which is engaged by a pawl, N, which prevents the chains and ladder wound upon the reel from unwinding when the pawl engages the ratchet-wheel. Two endless chains, O, pass over the reels, and the upper end of a ladder, P, composed of two chains, Q, and rounds R, of gas-pipe or similar round-iron bars, is attached to the chains, so that by turning the crank the ladder may be wound upon the reels or be unwound and lowered. The lower ends of the ladder-chains are provided with hooks S, which may engage a staple, T, at the lower end of the wall, below the window, there being one staple for each window or opening in the wall through which the ladder may be passed, so as to secure the lower end of the ladder. It will thus be seen that when it is desired to use the apparatus it may be moved upon its casters to the window, the outer end of the frame tilted out of the window, where it will rest upon the lower pair of curved rods, when the ladder may be unwound to reach to the ground, where its ends are hooked into the bail at the bottom of the wall, the pawl at the inner reel or roller preventing it from being unwound farther than desired, while the apparatus may stand with the frame tilted in its upright position, as shown in dotted lines in Fig. 1, inclosed in the casing at any point in the room.

Having thus described our invention, we claim and desire to secure by Letters Patent of the United States—

1. In a fire-escape, the combination of a casing mounted upon casters and provided with bearings in the upper edges of its sides, and having its inner side adapted to be opened, a reel-frame rocking upon trunnions at the middle of its side pieces, and having arched upwardly and downwardly projecting rods upon

its outer end, and a metallic flexible ladder having means for being wound upon or unwound off the reel-frame, as and for the purpose shown and set forth.

- 5 2. The combination, in a fire-escape, of a casing mounted upon casters and having bearings in the upper edges of its sides, a frame having trunnions at the middle of its side pieces and forming transverse bearings at its  
10 ends, an outer roller or reel journaled in the outer bearings in the frame, a roller or reel journaled in the inner end of the frame and having a crank and a ratchet-wheel at one end, a pawl engaging the ratchet-wheel, endless  
15 chains passing over the reels, a flexible metallic ladder secured at its upper end to the end-

less chains, and having hooks at its lower end, bails secured at the bottom of the wall of the building, below the end of the apparatus, and arched rods secured to the upper and lower  
20 edges of the outer ends of the side pieces of the frame, all constructed to operate as and for the purpose shown and set forth.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

JAMES HOWARD ELLIS.

MYERS WILSON.

FRANCIS TANNER.

Witnesses:

DUNCAN DOUGALL,

EMILY DOUGALL.