(No Model.)

C. ELSBURY.

FIRE ESCAPE.

No. 396,552. Patented Jan. 22, 1889.

Fig. 1.

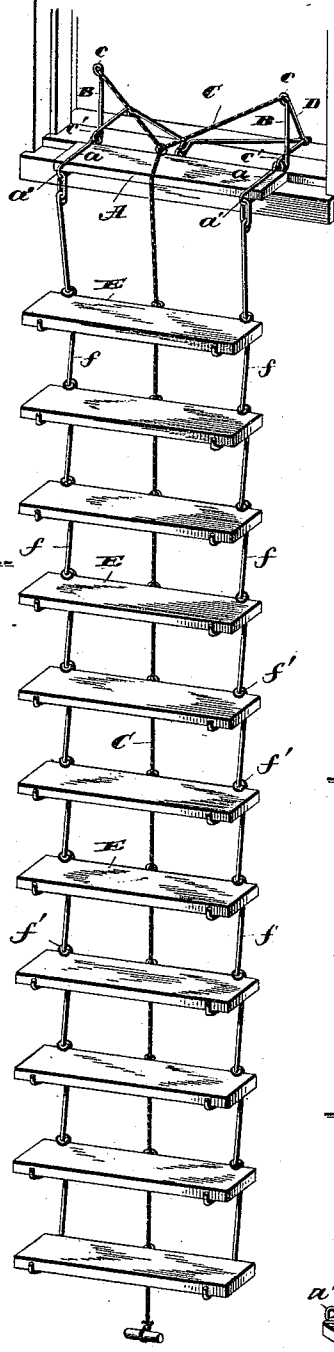


Fig. 2.

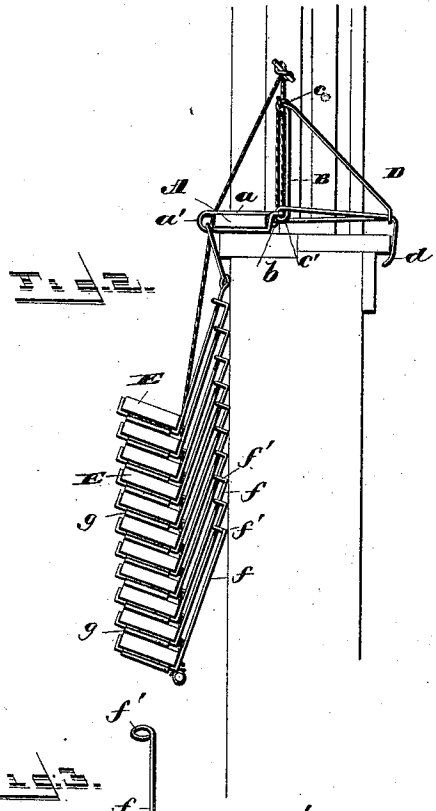


Fig. 3.

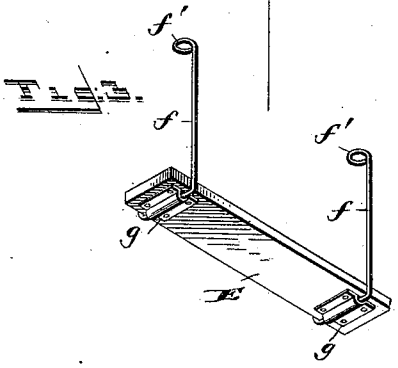
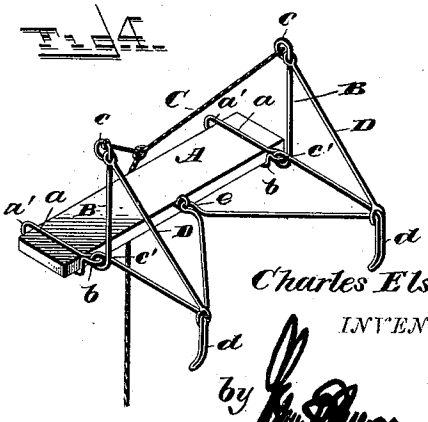


Fig. 4.



WITNESSES

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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 396,552, dated January 22, 1889.

Application filed June 26, 1888. Serial No. 278,241. (No model.)

To all whom it may concern:

Be it known that I, CHARLES ELSBURY, a citizen of the United States of America, residing at Eyota, in the county of Olmsted and State of Minnesota, have invented certain new and useful Improvements in Fire-Escapes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in fire-escapes, the object being to provide a fire-escape which can be readily attached to a window-sill and let down to provide an easy access, the parts being so constructed that the ladder can be readily folded to occupy but small space when not in use, and can be drawn up to prevent the same being used to gain access to a building from the ground; and it consists in the special construction and combination of the parts, as will be hereinafter fully set forth, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of my improved ladder, showing the parts in position for use. Fig. 2 is a side view showing the ladder attached to a window-sill, the parts thereof being drawn up so as to be suspended immediately beneath the window. Fig. 3 is a detail perspective view of one of the steps detached. Fig. 4 is a detail perspective view of the upper step and means for attaching the same to a window-sill.

A refers to the upper step of the ladder, rigidly attached to a metallic frame-work made up of bars of metal. To this step A are secured encircling bands *a a*, which are looped to project over the front edge of the step, as shown at *a'*, and at the rear of the step they are formed into eyes *b*, with which the bars forming the supporting-frame engage. B refers to a bar of metal, the upwardly-projecting ends thereof being formed into eyes *c c* for the reception of a cord or rope, C. The ends of the bars B having the eyes *c c* extend downwardly and are bent upon themselves, forming loops *c'*, which pass through the eyes *b*, and from thence extend outwardly, passing through eyes formed on the ends of brace-rods D D, from which they are bent downwardly to form hooks *d*, the connecting portions of the bars being bent inward and secured to the center of the step A by an eye, *e*. The brace-rods D D engage with the eyes *c c*, as shown. By this construction the upper step, A, can be securely and removably attached to a window-sill to support the ladder in an operative position. The vertical side bars, B, will form hand-grasps for a person getting out of the window upon the ladder. It will be observed that this frame-work is attached pivotally to the inner side of the step A, so that the first step may assume, when the ladder is in use, either a horizontal position, as shown, or a vertical position when the same is attached to a narrow support. The steps E E of the ladder are all of similar construction, and are provided with supporting-bars *f f*, the upper ends of which have eyes *f'* formed therewith, while the lower ends are bent to lie under the step E and extend for a short distance over the front edge thereof. The bars *f* are pivotally secured to the under side of the steps E by straps *g*. When the ladder is extended, the eyes *f'* will rest upon the upper edge of the adjacent step, and when in use the steps will always be maintained in a horizontal position.

When the ladder is let down, it will normally be in a vertical position, the steps being horizontal; but should it be desirable to move the ladder to one side, so as to descend from a window and pass beyond the window beneath, through which flames may be issuing, a person upon the ground can grasp and draw the ladder to one side, so that it will hang at an angle instead of vertical, and when held in such a position the steps E E will be maintained in a horizontal position, the bars *f f* swinging in the straps *g* attached to the under side of the steps. All of the steps are provided on their rear sides with eyes *h*, through which a cord or rope C passes, so that the ladder can be drawn up to bring the same to the position shown in Fig. 2. This cord can also be used for disconnecting the supporting bars and hooks from the window-sill when desired, as by moving the foot of the ladder slightly outward when suspended and drawing sharply upon this cord, which is attached to the upper ends of the bars B, the frame having the hooks can be

detached, the lower ends of the bars serving as a fulcrum when the upper ends are drawn upon.

The device hereinbefore described is simple, cheap, and effective, has no parts which are liable to get out of order, and when not in use may be stored to occupy but a small space.

This device is not only adapted for use as a fire-escape, but may also be used as an ordinary ladder.

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

1. The combination, in a folding ladder, of the steps E E, having bars *f* pivotally secured to the under side thereof, the upper ends of said bars being formed into eyes which encircle corresponding bars attached to the step immediately above, substantially as shown, and for the purpose set forth.

2. In a fire-escape or folding ladder, the combination of the step A, pivotally attached by means of loops *a* to a frame made up of bars B and D, which are bent substantially as shown, and provided with hooks *d d*, and a ladder constructed substantially as shown, adapted to be suspended therefrom, the parts being organized substantially as shown, and for the purpose set forth.

3. In a ladder, the steps E, provided with bars *f*, the lower ends of which are pivoted to the steps, their upper ends being formed into eyes which slide upon the bars attached to the adjacent step, and a cord, C, passing through eyes projecting from the rear edges of the steps and connected to a supporting-frame having upwardly-projecting arms, substantially as shown, and for the purpose set forth.

4. The combination, with a flexible ladder, of a step, A, provided with loops *a*, having eyes *a'* and *b* formed on opposite sides thereof, a central eye, *e*, and bar B, having ends formed into eyes *c c*, loop *c'*, passing through the eyes *b b*, hooks *d d*, and members extending from the upper portion of said hooks to the eye *e*, and brace-rods D D, extending from the upper portion of the hooks to the eyes *c c*, the parts being organized substantially as shown, and for the purpose set forth.

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

CHARLES ELSBURY.

Witnesses:
D. G. ELLSBURY,
EDWIN DUNN.