

H. MARSHALL.

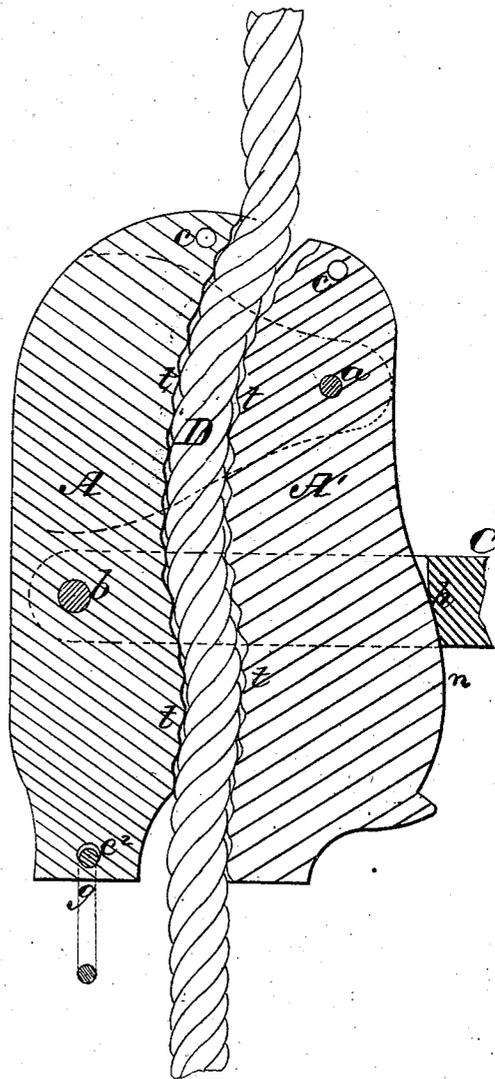
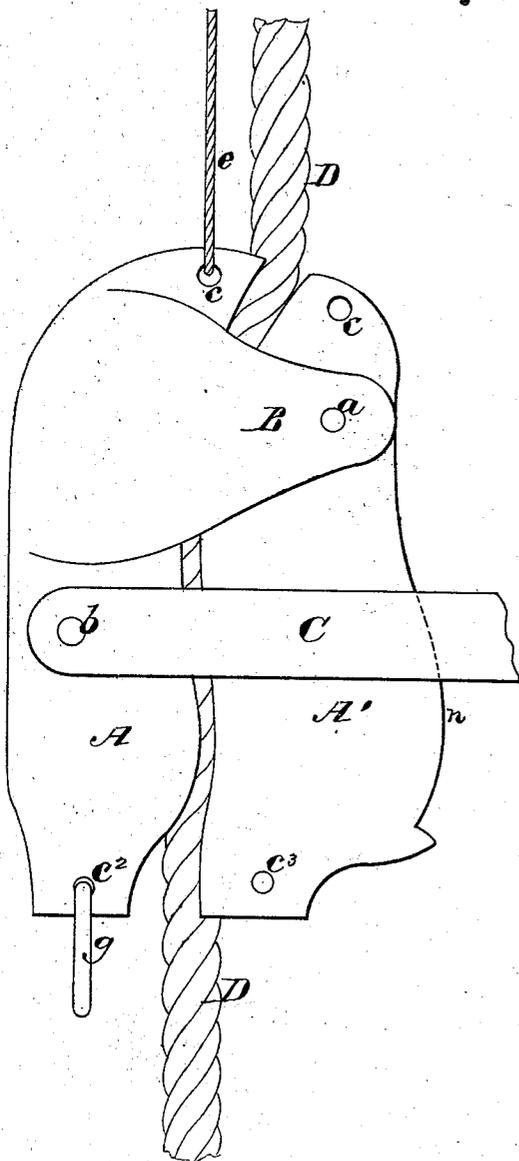
Fire-Escapes.

No. 133,870.

Patented Dec. 10, 1872.

Fig. 1

Fig. 2



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R. T. Campbell.
J. H. Campbell.

Inventor
Hammond Marshall
by his attys
Mason Fenwick Lawrence

UNITED STATES PATENT OFFICE.

HAMMOND MARSHALL, OF ATLANTA, GEORGIA.

IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. 133,870, dated December 10, 1872.

To all whom it may concern:

Be it known that I, HAMMOND MARSHALL, of Atlanta, in the county of Fulton and State of Georgia, have invented a new and Improved Fire-Escape; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a side view of the improved fire-escape, and Fig. 2 is a section through the same.

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

This invention has for its object the combination of two gripping-jaws with a lever in such manner that a portable compact fire-escape is obtained, by means of which a person can descend from any height according to the length of his rope with perfect ease and safety, as will be hereinafter explained.

The following description of my invention will enable others skilled in the art to understand it.

In the accompanying drawing, A A' represent two clamping-jaws, between which is a rope, D. These jaws are grooved transversely on those edges which embrace the rope, and the surfaces of the grooves are corrugated, as shown at *t t*, Fig. 2. I prefer to make the corrugations rounded instead of angular, and although I have shown them extending from end to end of each groove they need not extend more than one-third or one-half the distance. The grooved and corrugated edges of the jaws are also curved in a serpentine manner longitudinally, so that the rope D will take this course at the place where it is clamped between the jaws. The jaw A is constructed with two transverse jaws, B, near its upper end, between which the jaw A' is received and to which this jaw is pivoted at *a*, a sufficient space being left between the two jaws A A' to allow them to slide freely on the rope D when they are not clamped thereon. The jaw A has pivoted to it at *b* a lever, C, which is a hand-lever, and which is bifurcated so as to embrace both jaws, its crotch terminating in an abutment, *h*, which, when it is drawn

down, as shown in the drawing, will press against a cam surface, *n*, on the back edge of the jaw A' and draw together the two jaws, thus causing them to embrace the rope D with more or less force according to the weight of the person descending by the rope D, or the speed with which he may desire to descend. At *c² c³* holes are made through the jaws A A' for receiving-rings *g*, one of which is shown applied to the jaw A.

To either of the rings *g* the person who desires to descend by the rope attaches himself. This may be done by a strap around the waist and a strap-hook, or by any other suitable means.

Through the upper end of each jaw a hole, *c*, is made, to which a cord, *e*, is fastened, by means of which the jaws can be elevated.

If desirable the bearing portion *h* on lever C may be made adjustable by means of a set-screw, or the pivot *b* of this lever may pass through an adjustable nut inserted into the jaw A. This arrangement would admit of the jaws being clamped upon the rope before a person commences the descent, and would render unnecessary the use of the hand on the lever C or the application of force thereto during the descent. With such adjustable device marks may be made representing the different degrees of compression to be applied to the jaws for different weights and the different speed of descent for a given weight.

My invention is not only useful as a fire-escape, but it is also useful for painters and others working on the sides of structures.

What I claim as new, and desire to secure by Letters Patent, is—

1. The swelled or cam-shaped surface *n* on the jaw A', in combination with the lever C and jaw A, substantially as described.

2. The two clamping-jaws A A' connected together by a compression-lever, the arms B, and pivot *a*, and presenting between them a serpentine groove, substantially as described.

HAMMOND MARSHALL.

Witnesses:

JNO. WILLIAMS, Jr.,
JACOB F. GROVE.