W. N., J. B. & W. N. CLARK, Jr.

FIRE-ESCAPES.

No. 194,291. Patented Aug. 21, 1877.

Fig. 1.

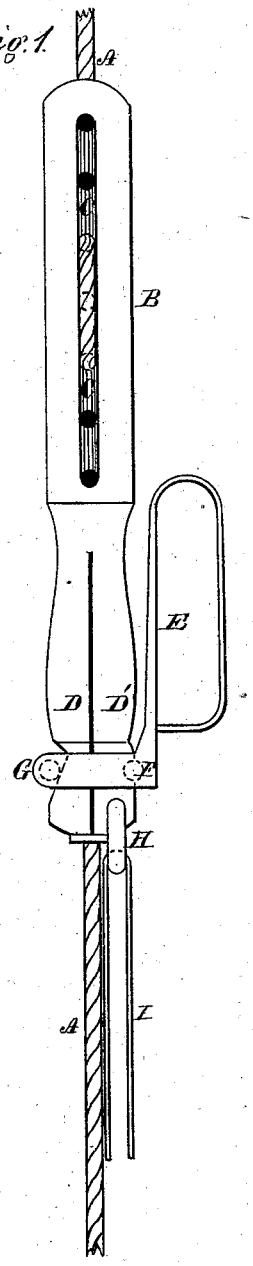
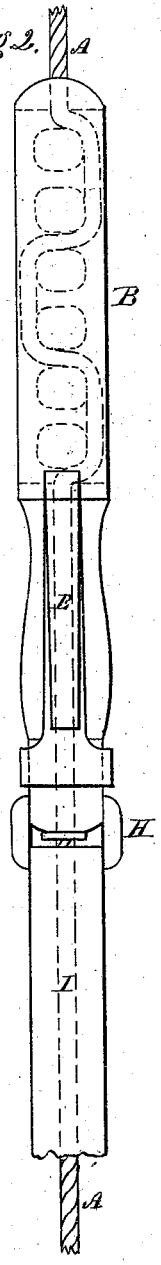


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM N. CLARK, JAMES B. CLARK, AND WILLIAM N. CLARK, JR., OF CHESTER, CONNECTICUT.

IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. **194,291**, dated August 21, 1877; application filed June 21, 1877.

To all whom it may concern:

Be it known that we, WILLIAM N. CLARK, JAMES B. CLARK, and WILLIAM N. CLARK, Jr., of Chester, in the county of Middlesex and State of Connecticut, 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 thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

Our invention relates to an apparatus designed for descending from a window, balcony, or roof of a burning building; and it has for its object the providing of a portable apparatus which can easily be carried by a traveler with his ordinary baggage, and which can be safely used for descending in case of emergency, or for the lowering of other persons or things to the ground.

Our invention consists in the construction and arrangement of the device that will be hereinafter described.

In the accompanying drawings, Figure 1 shows a side view of our improved apparatus. Fig. 2 shows a view from a direction at right angles to that shown in Fig. 1. The dotted lines show a section of the parts as they would appear upon a vertical section through the middle.

A is a cord or rope, extending from some higher point to the ground. B is a slide, intended to be let down the cord with any degree of speed desired, or to be held fast at will. The cord passes in at the top of this part, and then back and forth through a series of holes, in order to create friction, in the manner of what is known as a "tent-slide." In the drawing there are shown seven of these holes, through which the cord can be made to pass; but the cord is shown as passing through only a part of them, as a greater or less number can be used to give the amount of friction desired. The ends of these holes are connected by a channel or groove, C, so that the cord, in passing from one to the other, shall not project beyond the surface of the slide, and make it inconvenient to grasp in the hands while descending. After leaving the holes the cord passes downward through the middle of the slide and out at the lower end. The lower part of the slide is split into two parts, as shown in Fig. 1, at D D′, and these are provided with a clamp to draw them together, and clasp the cord with more or less pressure, as may be required to regulate the speed of descent.

E is the handle of the clamp, which is operated by grasping it and the slide with one hand, in such a manner as to draw them together. F is the pivot upon which the clamp turns, and G is a roller, which runs upon an inclined part of D and draws the two parts together. H is a ring in the bottom of the slide, for the purpose of carrying the strap I, part of which is shown in the drawing. This strap is intended to be of a suitable length to support a person in descending, either by placing the feet in the loop, or by passing it under the arms, or for use in any way that may be found most convenient.

The operation of our invention is as follows: The upper end of the cord is attached to some permanent part of the building, or to some heavy article of furniture, and the free end dropped to the ground. The foot is placed in the loop of the strap I and the slide grasped with both hands, one hand embracing the handle E of the clamp and the lower part of the slide at D. The descent is then made as slowly or as rapidly as may be desired by exerting more or less pressure upon the handle of the clamp. The resistance caused by the clamp is such that the motion can be entirely stopped, if required. This resistance is not only that due to the pressure of the parts D D′ upon the cord, but the tightening of the cord below the holes in the upper part of the slide causes a much greater amount of friction in them, so that very little pressure upon the handle of the clamp is necessary to regulate the motion.

This effect of increasing the friction in the holes can be produced also by drawing upon the cord from below. In this manner the descent of children or inanimate objects can be

accomplished. A person at the lower end of the cord can regulate the rate of descent by greater or less tightening of the cord.

Our invention can also be used for the descent of more than one person from the same point. One can descend, when another can draw up the cord with the slide attached, pull the cord through it, and use the apparatus again as before described.

Instead of the series of holes, the necessary friction may be obtained by running the cord in a spiral groove or channel around the body of the slide; or spiral grooves may be made around the body of the slide, between the ends of the several holes.

Instead of a rope or cord, webbing may be used, the holes in the slide being made to correspond.

What we claim as our invention is—

1. The adjustable slide B, made of one piece of wood, having a series of holes connected by the channel C, to produce friction upon a cord, and the lower end forked so as to embrace the cord, which passes through the holes and channels, substantially as herein described.

2. The clamp E F G, which can be clasped by the hand, together with the slide B, and press the forked ends upon the cord to produce greater friction, substantially as herein described.

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