(No Model.)

H. E. GOBLE.

FIRE ESCAPE.

No. 284,627. Patented Sept. 11, 1883.

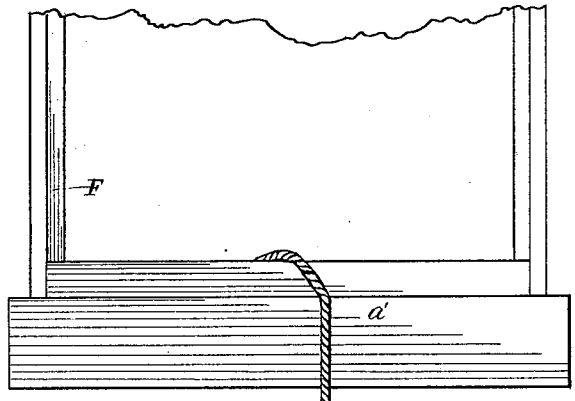
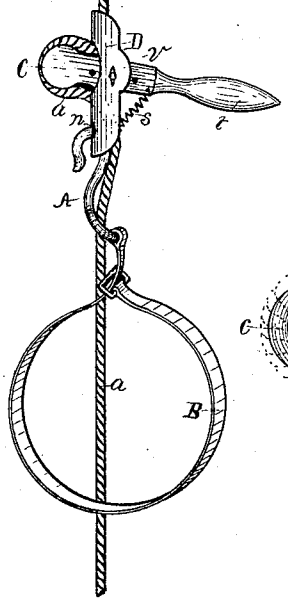


Fig. 1



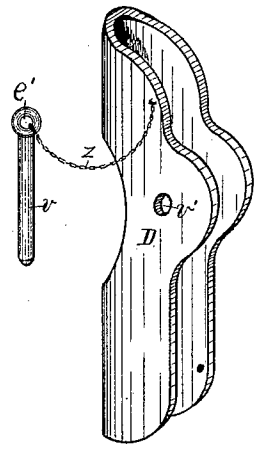


Fig. 2

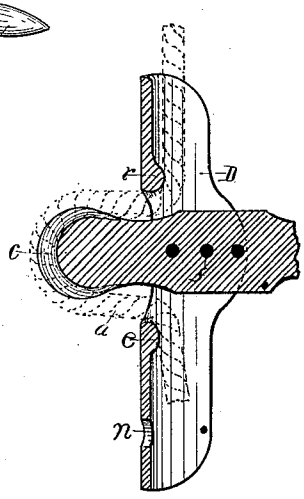


Fig. 3

Fig. 4

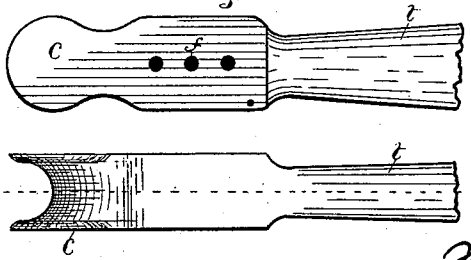


Fig. 5

Witnesses.

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UNITED STATES PATENT OFFICE.

HIRAM E. GOBLE, OF KALAMAZOO, MICHIGAN.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 284,627, dated September 11, 1883.

Application filed February 20, 1883. (No model.)

To all whom it may concern:

Be it known that I, HIRAM E. GOBLE, a citizen of the United States, residing at Kalamazoo, county of Kalamazoo, State of Michigan, have invented a new and useful Fire-Escape, of which the following is a specification.

My invention has for its object the construction of an improved fire-escape, the utility and novelty of which are hereinafter described and claimed.

A general description of a device embodying my improvements consists in a rope, a grapple adapted to play downward on said rope by the weight of the person, and a belt connected with the grapple for encircling the body.

In the drawings forming a part of this specification, Figure 1 shows the device complete suspended from a window-sill; Fig. 2, a rear perspective view of the lever-support in Fig. 1; Fig. 3, a vertical section of the grapple intercepting the dotted line on the lever in Fig. 5; Fig. 4, a side view of the lever enlarged; and Fig. 5 is a top view of the same.

The rope *a* is here shown suspended from the window-sill *a'* of a building. The grapple consists of a semi-tubular shell, D, termed the "lever-support," having an aperture through it to receive said lever C. The shell D has a pivot-hole, *v'*, and the lever C has one or more pivot-holes, *f*. In these holes the detachable pin *v* is located, pivotally connecting said parts.

A is a hook connecting the belt B with the grapple, said hook being located in a hole in the shell D for this purpose, *n*, Figs. 1 and 3. The end of lever C is made round and provided with a frictional groove, in which the rope *a* is located. The rope is connected with the grapple by placing it in the shell D and forcing a loop out through the lever-aperture by pressing the grooved end of the lever C against the rope until the desired hole *f* is at the right position to receive the pivot *v*, Fig. 3. By having a series of holes *f* in the lever the desired friction on the rope may be secured in accordance with the size of the rope. The rope may be passed down through a loop in the lower end of hook A to keep the rope in place, as in Fig. 1. The shell D is provided with ribs or lips *r e* at the points where the rope passes out and in the shell, forming a greater frictional surface at said points. The lever C has a handle end, *t*. In Fig. 1 a spring, S, is shown, connecting with the shell and lever and holding the grapple locked on the rope—that is, the spring draws down on the handle end of lever C, holding the rope so firmly between the upper side of the grooved end of the lever and the frictional surface *r* of the shell that the grapple is locked on the rope, and will not descend on the rope when sustaining the weight of a person unless the handle end *t* of the lever is raised.

In the operation the belt B is secured around the body and the handle *t* grasped by the hand. It is thus impossible for the person descending to fall, even should he become insensible. The degree of speed at which a person descends is controlled by the lever C with the hand-hold of the handle end. When the spring S is used, the handle end of the lever is gently raised; but where the spring is not used the operator bears down on the handle to cause a descent. Thus the person may stop at any point in the descent quickly and without danger. The detachable pivot *v* has an eye, *e'*, at one end, with which chain *z* connects. The chain *z* is connected with the shell D, thus preventing loss of the pivot.

The whole device, except the rope and belt B, is preferably made of metal, but is so light in weight and small in compass that it can be conveniently carried in a traveler's satchel. It is very simple to make and understand, and so accurately adjusted is its frictional leverage that a child can descend with it as easily and safely as a grown person.

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

1. The combination, with the grapple consisting of a semi-tubular shell having the lever-aperture, a lever having a frictional groove in the end and a detachable pivot, of a body-belt and a rope located in the shell and around the grooved end of the lever, all substantially as set forth.

2. A rope-grapple consisting of a semi-tubular shell having an aperture to receive the lever, the lever, the pivot, and a spring

connecting with the shell and lever, for the object stated, substantially as specified and shown.

3. In combination with a rope, a rope-grapple, consisting of a semi-tubular shell having a lever-aperture and the frictional ribs, the pivoted lever having the end friction-groove, and the spring connecting the lever and shell, substantially as set forth.

4. The shell having the lever-aperture and pivot-hole, a lever having the end friction-groove, a handle end and a series of pivot-holes, and a detachable pivot, in combination with a rope used in the relation to the grapple shown, all substantially as specified and shown.

In testimony of the foregoing I have hereunto subscribed my name in the presence of two witnesses.

HIRAM E. GOBLE.

Witnesses:
LEON KEWNEY,
WILLY EPLEY.