

(No Model.)

H. E. GOBLE.

FIRE ESCAPE.

No. 284,627.

Patented Sept. 11, 1883.

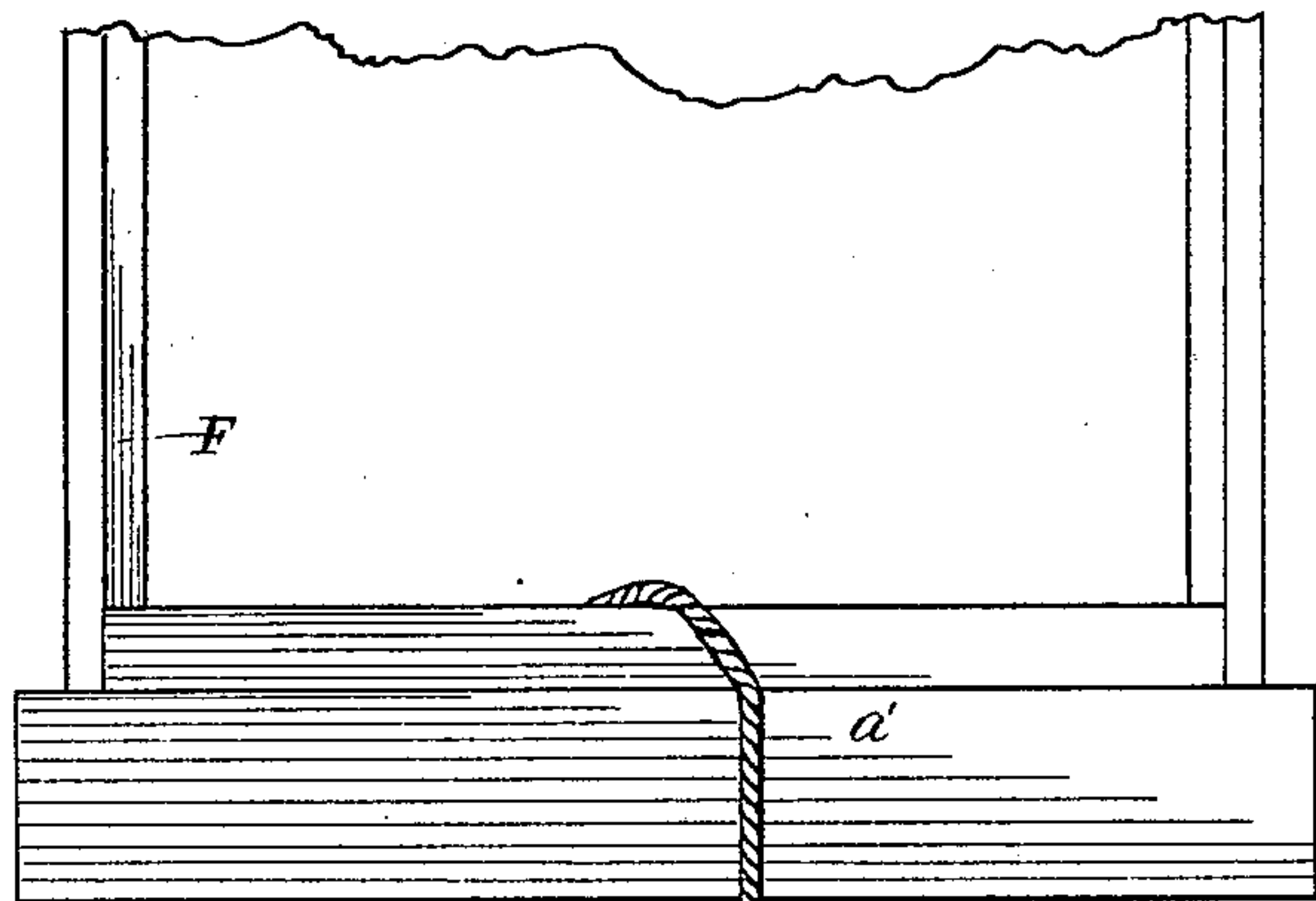


Fig. 1

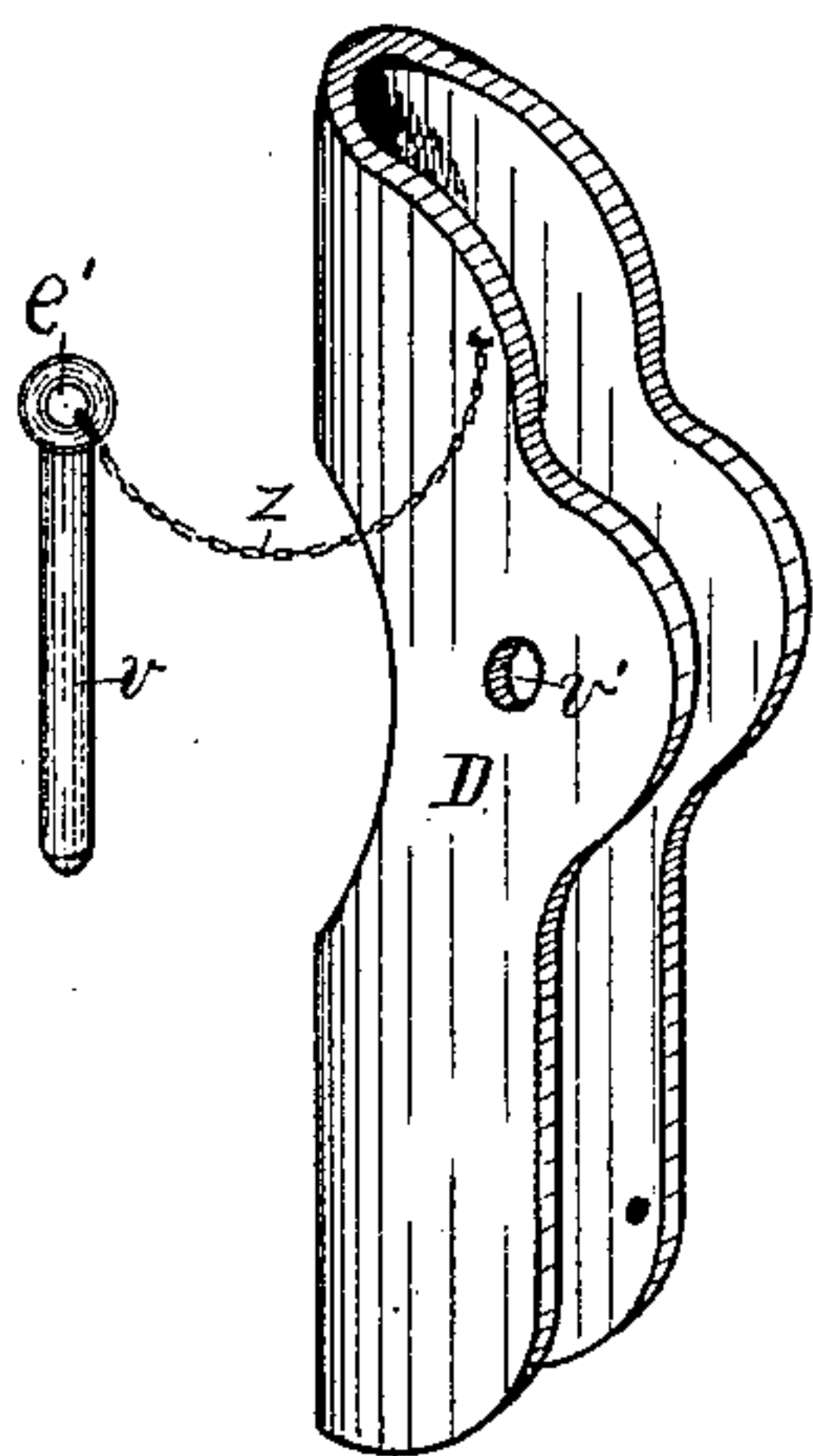


Fig. 2

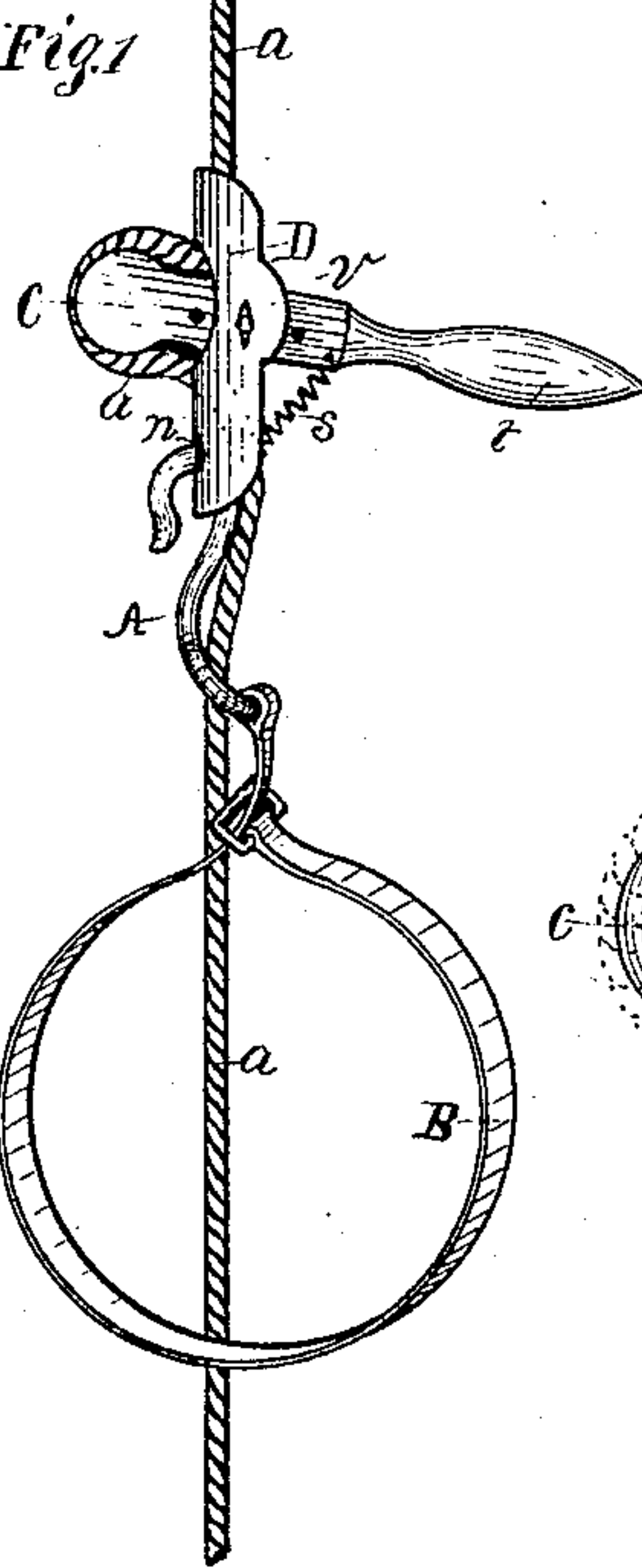


Fig. 4

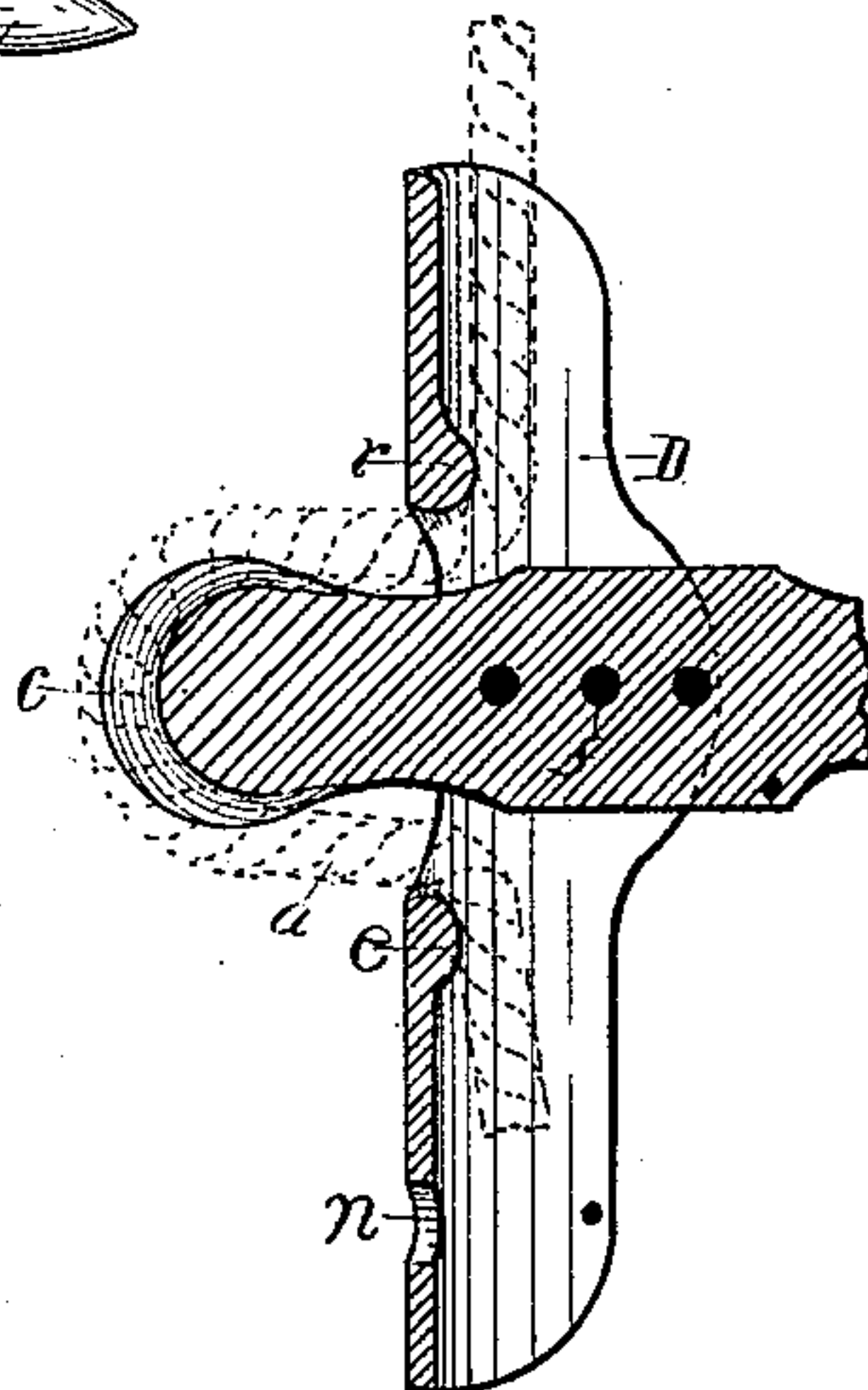


Fig. 3

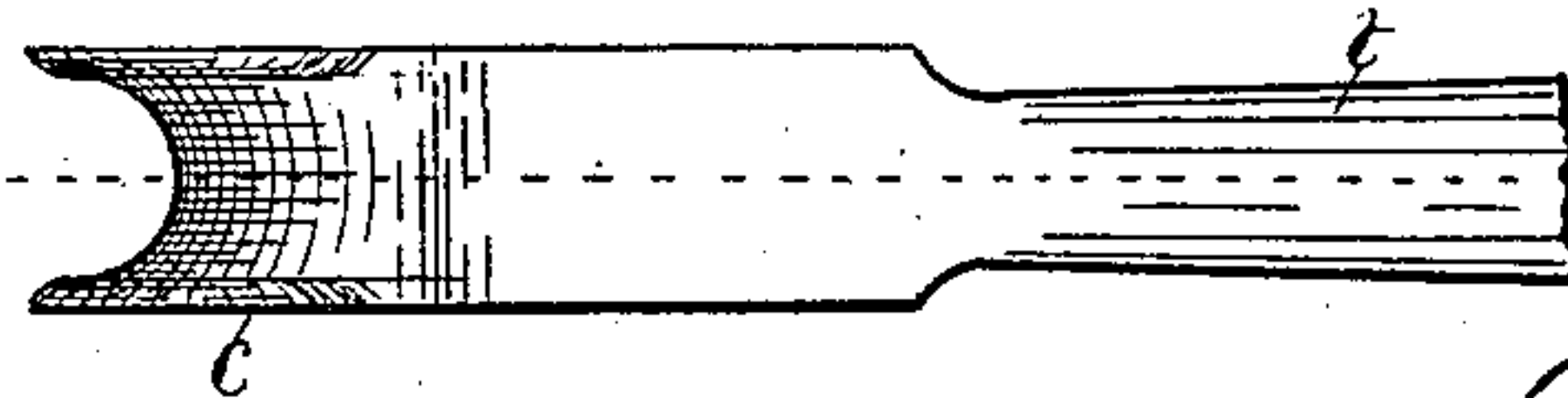
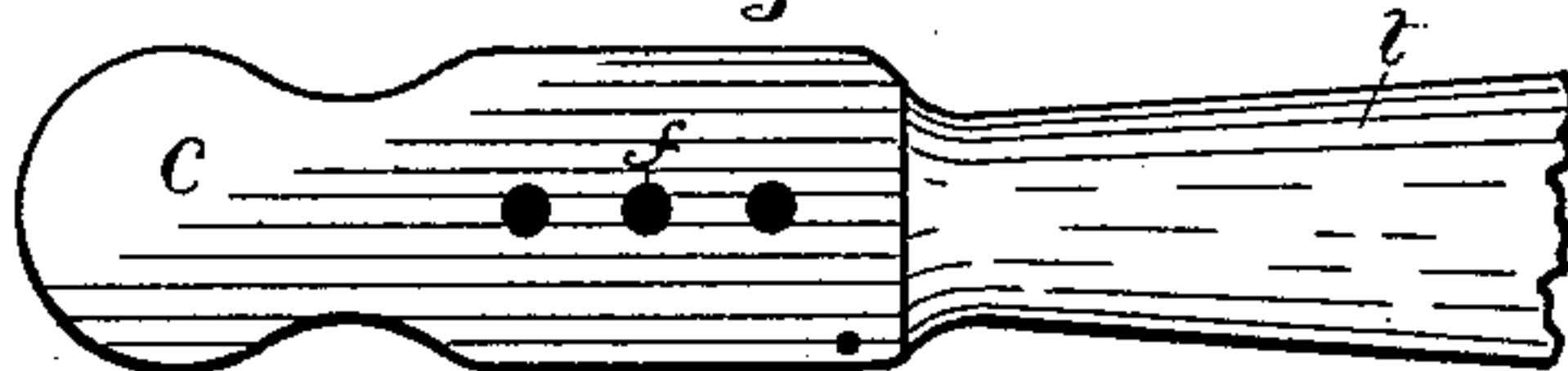


Fig. 5

Attest.

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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.

10 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. 15

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.