W. H. H. SISUM.

FIRE-ESCAPE.

No. 191,480. Patented May 29, 1877.

Fig: 1.

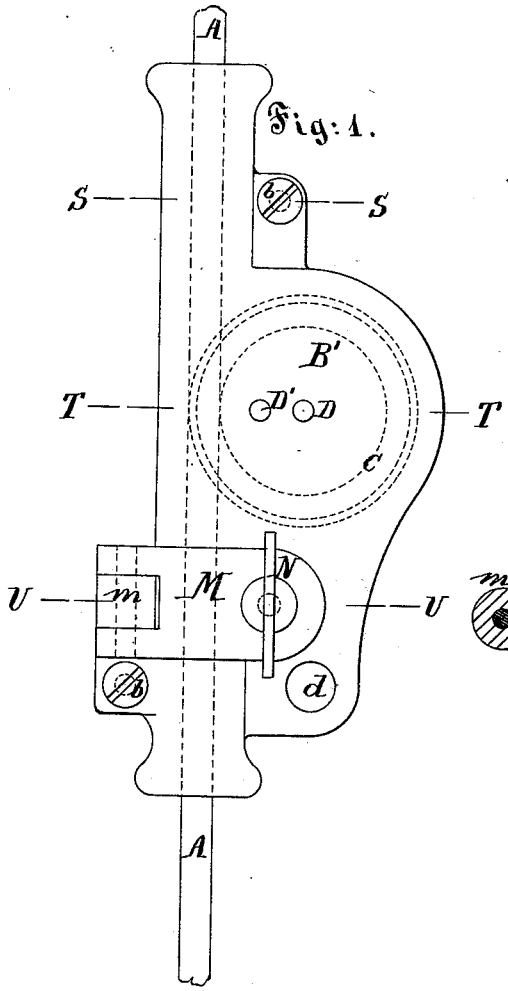


Fig: 2.

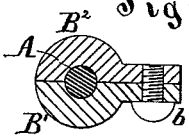


Fig: 3.

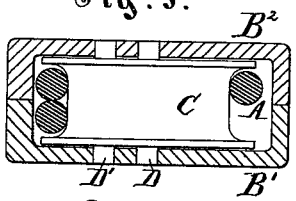
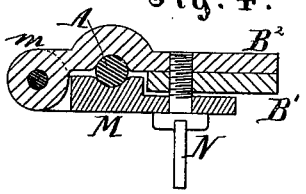


Fig: 4.



Witnesses:

Chas. C. Stetson.

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by his attorneys

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UNITED STATES PATENT OFFICE.

WILLIAM H. H. SISUM, OF BROOKLYN, ASSIGNOR TO HERBERT R. HOUGHTON, OF NEW YORK, N. Y.

IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. **191,480**, dated May 29, 1877; application filed May 15, 1877.

To all whom it may concern:

Be it known that I, WILLIAM H. H. SISUM, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements Relating to Fire-Escapes, of which the following is a specification:

I have devised safe and convenient frictional means, which I can easily attach to the person, and allow the person to descend on an ordinary rope, by a reliably moderate and easily controllable rate of speed. The whole can be carried in the pocket.

Referring to the accompanying drawings, which form a part of this specification, Figure 1 is a side elevation of the clamp or friction device complete. This shows also a part of the rope on which the person descends by reason of the clamp allowing the said rope to slip throught it. It also shows some of the interior work in dotted lines. Fig. 2 is a horizontal section on S S in Fig. 1; Fig. 3, a horizontal section on T T in Fig. 1, and Fig. 4 is a horizontal section on U U in Fig. 1.

I esteem braided cotton the best rope, but do not confine myself to any particular kind.

Referring to the drawings and to the letters of reference marked thereon, A is the rope, assumed to be strongly fixed to some convenient point above, and B^1 B^2 are the two halves of a shell, of brass or other suitable material, strongly united by screws, rivets, or other fastenings at *b b*. C is a wheel, of brass or other proper material, having a groove around its periphery. It is hung on a pin, D, and prevented from turning by another pin, D′. A sufficient space is left within the shell to allow the rope A to lead up from below, and pass around the wheel C, and out at the top, as indicated, meeting with considerable friction in its passage in either direction, but which friction will obviously be increased very greatly by any considerable additional resistance applied at the right points.

M is a clamping-piece, pivoted at *m*, where is a stout knuckle-joint. N is a reliable thumb-screw, inserted through the part M, and tapped into the shell B^1 B^2. The passage of the rope A is resisted according as the screw N is turned to tighten the pinch of the part M upon it.

A rope (not represented) or any suitable strap or fastening may be engaged with the device by being passed through a hole, *d*. Such rope or strap may form a seat for the person using the apparatus, or may be secured around the waist, or otherwise attached to the person, as may be preferred.

In operation the person descending by use of my apparatus turns the screw N in one direction to relax the grip, and allow himself to run down faster, and in the opposite direction to tighten the grip, and cause himself to descend slower.

It will be observed that in the use of the apparatus the entire device moves downward on the rope A, and the friction made by the clamp M is applied on the slack part of the rope. It therefore not only contributes its own friction, but greatly increases the friction of the rope around the sheave or wheel C. This gives so great a frictional resistance that it will be easy to control the descent of the heaviest man. It will even be practicable, I believe, for a cool-headed and agile person to take one or more children, or other frightened or weak persons, under his control, and attaching them by a cord, or the like, to himself, or to the shell B^1 B^2, to descend with them moderately and safely.

A trusty man, remaining in the window above, may again pull up the rope after each use, and on slackening the screw N, can soon pass the rope back again through the device, and make all ready again for another descent. A moderate amount of skill or nerve is sufficient to attend to the screw N during the descent.

I can use ropes of hemp, or any ordinary material. Wire rope offers some peculiar advantages. The strong friction caused by my clamp can induce sufficient resistance on the most polished surfaces.

What I claim as my invention is—

1. The clamp M and screw N, in combination with the stationary wheel or circular part C, grooved as shown, and with a shell or

frame having provisions *d* for receiving an attachment to the person, all adapted for use on a rope, A, as a fire-escape, as herein specified.

2. The combination of the rope A, with the parts B^1, B^2, C, D, D′, *d*, M, *m*, and N, as and for the purposes specified.

In testimony whereof I have hereunto set my hand this 10th day of May, 1877, in the presence of two subscribing witnesses.

WM. H. H. SISUM.

Witnesses:

WILLIAM N. NEWMAN,

CHAS. C. STETSON.