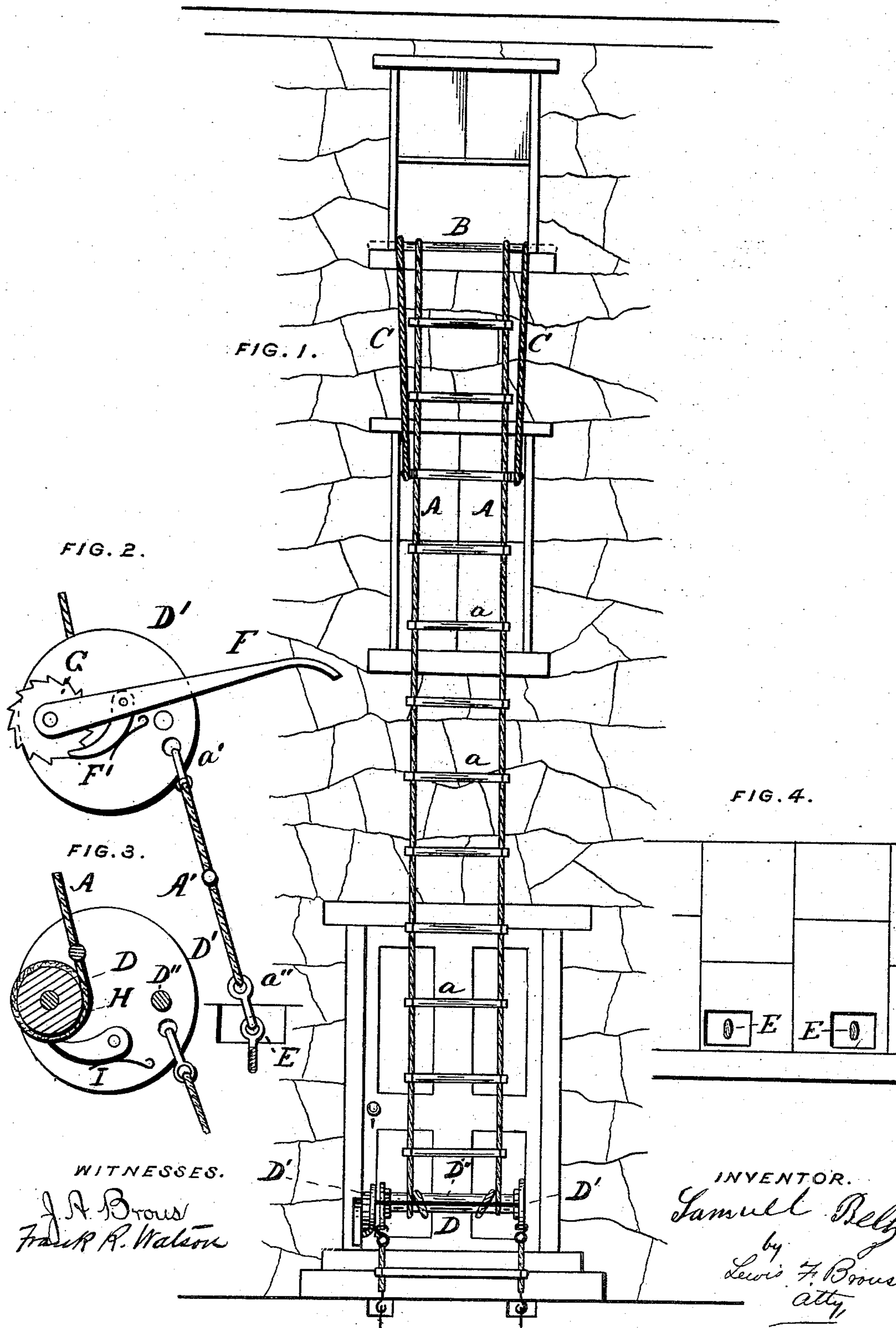


(No Model.)

S. BELTZ.
FIRE ESCAPE.

No. 298,723.

Patented May 20, 1884.



UNITED STATES PATENT OFFICE.

SAMUEL BELTZ, OF WILMINGTON, DELAWARE.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 298,723, dated May 20, 1884.

Application filed December 19, 1883. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL BELTZ, a citizen of the United States, residing at Wilmington, in the county of New Castle and State of Delaware, have invented a new and useful Improvement in Fire-Escapes, of which the following is a specification.

My invention relates to that class of fire-escapes or ladders which are not required to be permanently adjusted in place, but which may readily be adjusted at any opening, as circumstances may require.

The object of my invention is such an adjustable fire-escape or ladder and one that can be readily and firmly attached at the place required that will be light, so as to be easily handled and moved, and that will take up only a small space when not in use, so as to be conveniently stored; that can be cheaply and easily made and yet be strong enough to answer all practical purposes.

In the accompanying drawings, Figure 1 is a front view of my newly-invented fire-escape in place. Fig. 2 is an end view of the reel, showing the take-up motion. Fig. 3 is a vertical section of the same, showing an inside view of one end of the same. Fig. 4 is a plan view of a piece of pavement, showing the eyes for attaching the ends of the ladder.

Similar letters refer to similar parts throughout the several views.

Referring to the drawings, A A represent the side supports of the ladder for supporting the rounds *a*, said side supports being preferably constructed of twisted rope of a weight and thickness to make it conveniently strong. The top ends of the side ropes are each connected to a cross-bar, B, which may be constructed of metal and of a length, when the ladder is in position, to catch upon the inside of the window against the window-facing or wall. Also connected to this cross-bar B are two pieces of flexible wire rope, C, which pass for a short distance down parallel with the ladder and are fastened securely to the side ropes, A. The object of these flexible ropes is to prevent the fire from burning the ladder at a point where most likely the fire will be located, and when using the ladder for other purposes than a fire-escape, to render the ladder strong and effective and not being endangered by rubbing and chafing at a point in contact with the sill. The opposite ends of the side ropes are secured to a drum, D, which is journaled in circular side plates D',

forming a reel, and which plates connect with similar side-rope connections with hooks *a'*, and the opposite ends are supplied with hooks *a''*, which engage eyes E, secured in the curb, or those that may have been previously prepared and let into the pavement or sidewalk, and which, when the fire-escape is not in use, can be covered by plates similar to those in present use for water or gas. One of the end plates D', forming the reel, is provided with a lever, F, which is pivoted to the axle of the drum D, carrying a ratchet-wheel, G, which is operated by a spring-pawl, F', secured to the lever F. Upon the inside of each of the circular end plates D', secured upon the shaft of the drum D, is also an additional ratchet-wheel, H, which is engaged by pivoted pawls I on the circular end plates, to take up the slack in the side ropes, A.

When it is desired to use the ladder, the cross-bar B is adjusted in place at the bottom and within the window or door at any convenient point in the building, and the other end is dropped out of the window, the weight of the reel unwinding it. When the opposite end is secured in the manner described, the lever F is then vibrated and the slack is taken up and side ropes of the ladder made to assume a taut condition. A cross-bar, D'', connects the side plates, D', which tends to strengthen all the parts and also form a guide for the side ropes when winding up the reel.

A fire-escape constructed upon the plan shown can be made cheap, durable, and effective, and when not in use can be stored in a very small space.

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

The adjustable fire-escape described, consisting of a rope ladder provided at one end with a cross-bar, B, and guard-ropes C, to attach and hold the same in position, and the opposite ends of the side ropes supplied with fastening and tightening devices having hooks *a''*, which engage eyes E secured in the pavement in the manner described, and the reel D, with the lever F, and means whereby the reel can be operated, substantially as described.

In testimony that I claim the foregoing I subscribe my name in the presence of two subscribing witnesses.

SAMUEL BELTZ.

Witnesses:

WM. B. HILT,
LEWIS F. BROUS.