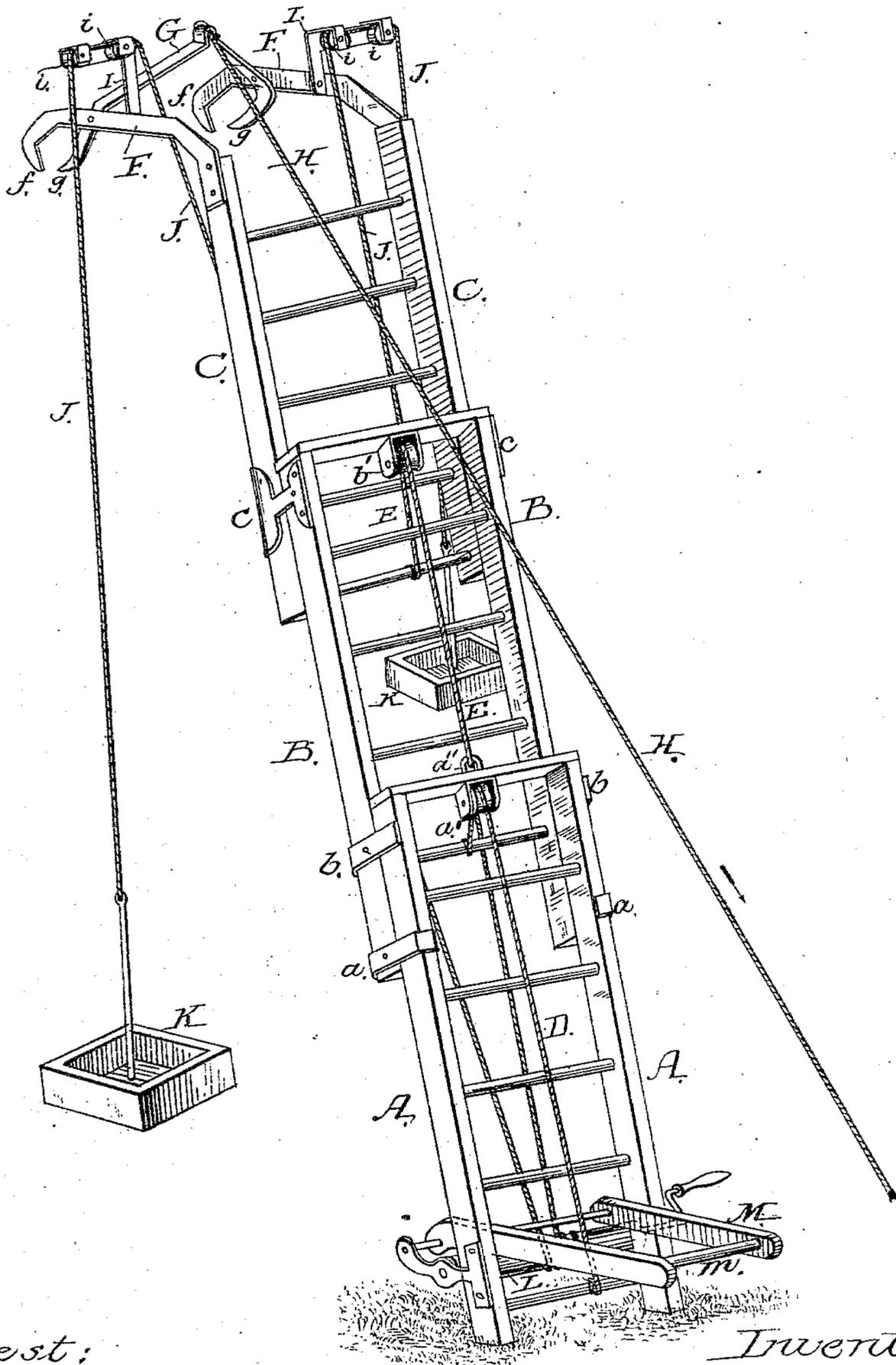


(No Model.)

G. A. SWARTZ.
FIRE ESCAPE LADDER.

No. 283,530.

Patented Aug. 21, 1883.



Attest:

Charles Fowler,
H. B. Applewhain

Inventor:

George A. Swartz
per Atty.
A. H. Evans & Co.

UNITED STATES PATENT OFFICE.

GEORGE A. SWARTZ, OF ORANGEVILLE, ILLINOIS.

FIRE-ESCAPE LADDER.

SPECIFICATION forming part of Letters Patent No. 283,530, dated August 21, 1883.

Application filed March 27, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. SWARTZ, of Orangeville, Stevenson county, State of Illinois, have invented certain new and useful Improvements in Fire-Escape Ladders, of which the following is a clear, full, and exact description, reference being had to the accompanying drawing, making a part of this specification, in which the figure is a perspective view of a fire-escape ladder extended with my improvements attached.

My invention relates to that class of fire-escape ladders which are constructed in sections and which are capable of being extended when raised and brought into use; and it consists of the several combinations of devices hereinafter explained and claimed.

To enable others skilled in the art to make and use my invention, I will proceed to describe the manner in which I have carried it out.

In the drawing, A, B, and C, represent the sections of a ladder telescoping or sliding together by means of the clasps or open collars *abc*. On the under side of the top of section A is secured the pulley *a'*, through which passes the cord D, the end of which is fastened at some convenient point to the lower end of section B, preferably to the lower rung of the section. It is evident from this construction that when the ladder, as closed, is elevated, and the cord D is drawn down, the section B can be raised until the clasps *a* and *b* come in contact, as shown in Fig. 1. On the top of section A and opposite to or above the pulley *a'* is a staple, *a''*, to which is attached the cord E. This cord passes through a pulley, *b'*, secured beneath the upper portion of the section B, and is attached to the lower rung of section C, the cord E being about the length of the section B. With this construction it is evident that as section B is raised the cord E, attached to the section A and passing through pulley *b'*, will raise section C, thus extending the three sections at the same time by drawing on cord D. When it is desired to return the ladder to its normal position, it is only necessary to loosen the cord D, and the sections will again telescope by gravitation. It is evident that by this construction other sections may be added and operated simultaneously. On the top of the upper section of

the ladder is secured a frame-work, consisting of the two arms F, provided at their outer or free ends with hooks *f*, and pivoted to these arms is the bent lever G, provided at outer ends with the hooks *g*, these latter hooks cooperating with the hooks *f* when caused to approach each other to secure the upper end of the ladder to the window-sill or to the roof of a building. The lever G is operated by the cord H, which extends downward within reach of the operator or fireman standing on the ground. From each of the arms F rises the standard I, bent outward at right angles to afford bearings for the pulleys *i i*, over which pass the cords J, and to the outer or free ends of these cords I attach the elevator-cages K, which alternate in their passages up and down by means of the cords J being wound in opposite directions around the drum or windlass L, so that as the one cord is wound up to elevate one cage the other cord is unwound and the cage lowered. This windlass is secured near the foot of the ladder, and is operated by means of a crank.

To check or control the movement of the windlass, I secure the brake M, which bears upon the windlass, and by a pressure of the foot upon the lever-bar *m* is caused to bear upon the windlass and readily and conveniently check its revolution, so as to render the movements of the cages safe, and guard against accidents.

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

1. In a fire-escape ladder, the sections A, B, and C, constructed as described, in combination with the arms F, provided with the hooks *f*, the bent lever G, provided with the hooks *g*, and cord H, all constructed to operate substantially as and for the purpose herein set forth.

2. In a fire-escape ladder, the sections A, B, and C, constructed as described, in combination with the pulleys *i i*, cords J, cages K, and windlass L, whereby the cages are adapted to be alternately raised or lowered, substantially as set forth.

GEORGE A. SWARTZ.

Witnesses:

HIRAM SKINNER,
WILLIAM SANDERS.