

(No Model.)

L. S. HODGDON.
FIRE ESCAPE.

No. 486,041.

Patented Nov. 8, 1892.

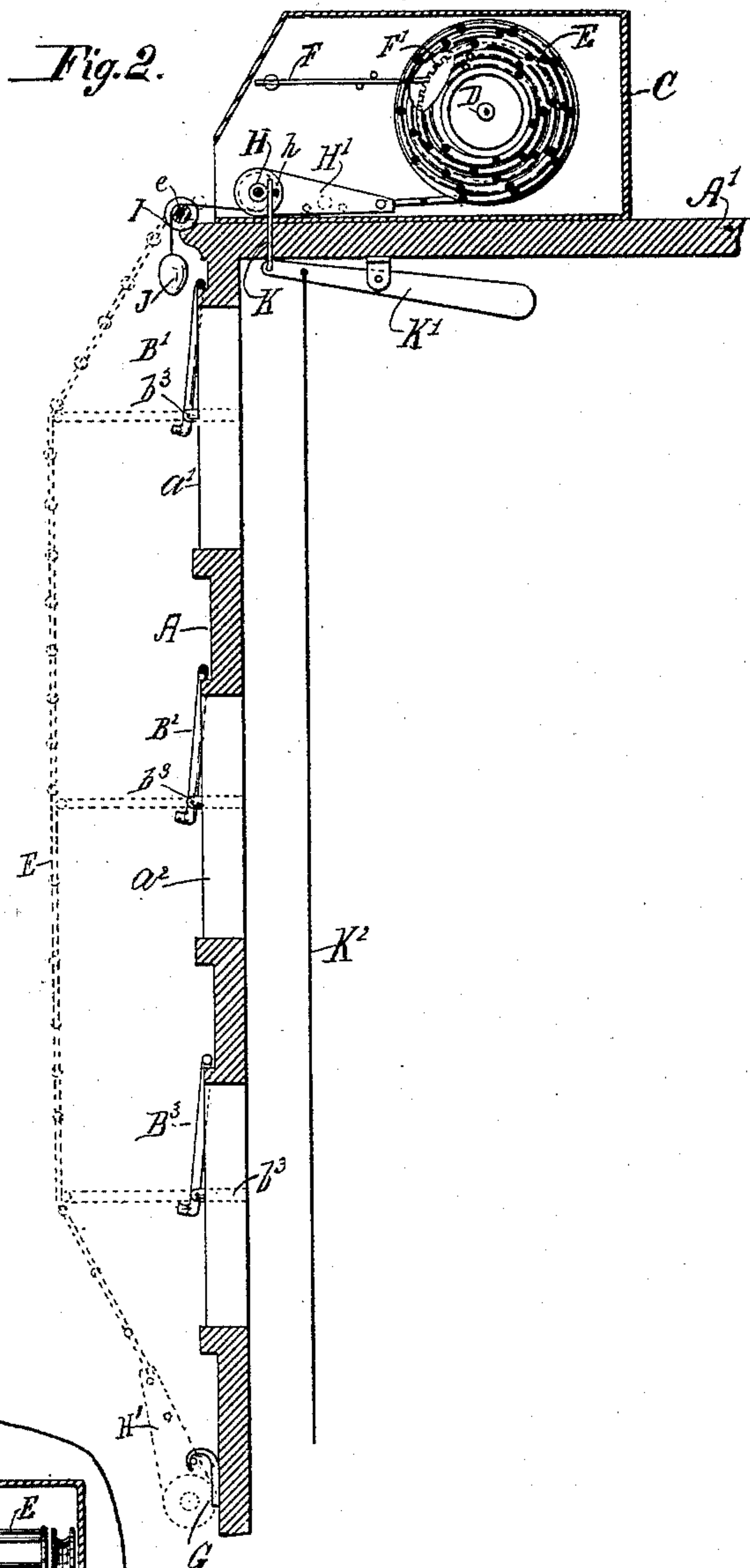
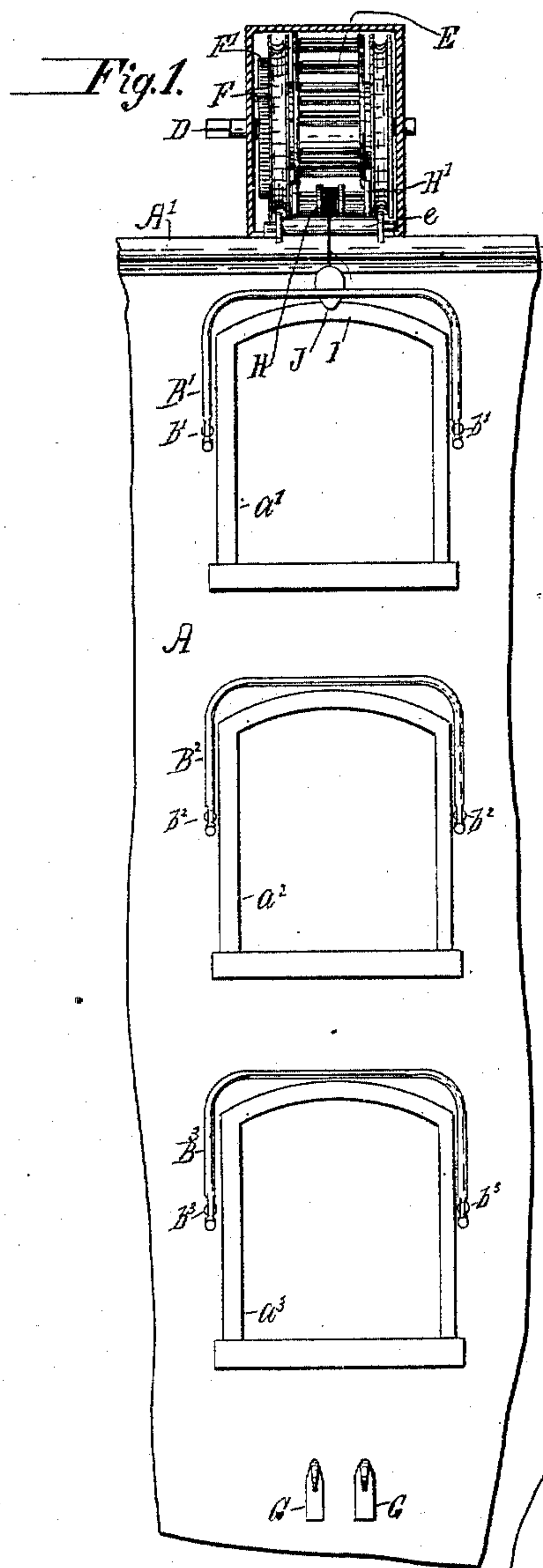
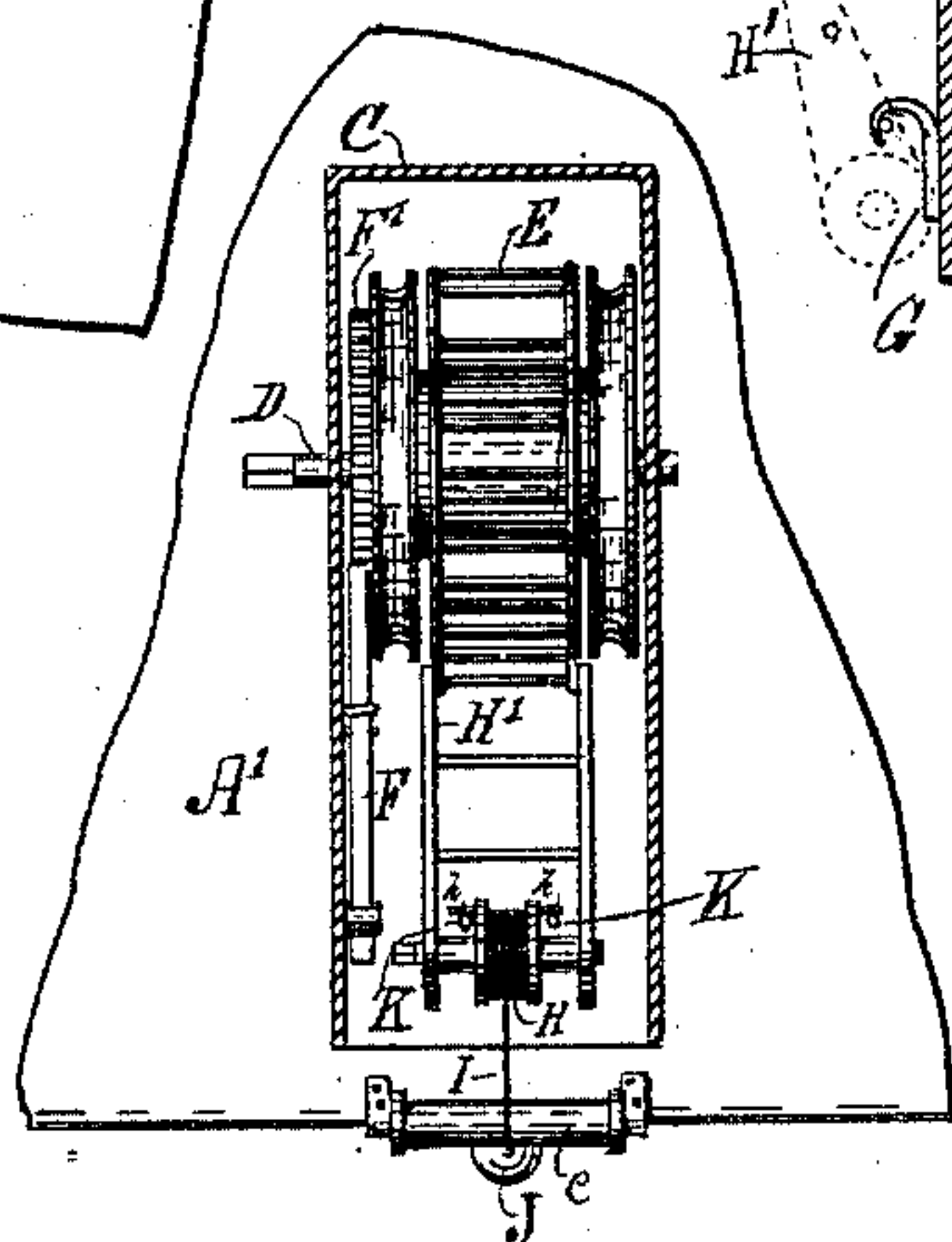


Fig. 3.



WITNESSES:
C. R. Ferguson
H. Conant

INVENTOR
L. S. Hodgdon
BY Edwin H. Brown
HIS ATTORNEY

UNITED STATES PATENT OFFICE.

LUE S. HODGDON, OF BANGOR, MAINE.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 486,041, dated November 8, 1892.

Application filed June 3, 1892. Serial No. 435,359. (No model.)

To all whom it may concern:

Be it known that I, LUE S. HODGDON, of Bangor, in the county of Penobscot and State of Maine, have invented a certain new and useful Improvement in Fire-Escapes, of which the following is a specification.

The object of my improvement is to produce a simple and efficient fire-escape, which will not disfigure the building to which it is applied, and yet can be promptly made available.

My invention involves the combination of a windlass arranged upon the top of a building or other suitable place, a flexible ladder which may be wound upon and unwound from said windlass, a windlass attached to the free end of the ladder and having a cord or equivalent device wound upon it, a weight applied to the cord for lowering it, and a detent for the last-mentioned windlass, whereby at any time the detent may be operated to release the windlass having the weighted cord applied to it, so that the cord may be lowered in front of a number of windows to enable any person desirous of using the fire-escape to pull down the ladder. The detent will preferably be operated inside the building. There may advantageously be combined with the parts already mentioned a number of bows or equivalent devices for keeping the ladder at a proper distance from the building.

In the accompanying drawings, Figure 1 is a front view of a portion of a building fitted with a fire-escape embodying my improvement. Fig. 2 is a vertical section of the same including a representation of the fire-escape. Fig. 3 is a top view of the fire-escape and a portion of the building.

Similar letters of reference designate corresponding parts in all the figures.

A designates the wall of a building having a number of windows a' a^2 a^3 arranged in a vertical line.

B' B^2 B^3 designate a number of bows fastened to the front of the building adjacent to the windows and capable of being swung up into a vertical position around the cornices of the windows or lowered into a horizontal position. These bows have their ends hinged by knuckle-joints to rods b' b^2 b^3 , which are inserted in the wall A at the sides of the jambs of the windows. Normally these bows will

occupy a vertical position; but they may be lowered into a horizontal position at will by grasping them with the hand and pulling them down.

C designates a box, which is intended to be entirely inclosed and water-tight. It may be made of any suitable material; but must be strong and substantial. It is intended to be securely fastened upon the roof A' of the building or to any other suitable part of the building. In the box C is journaled a windlass D, which may be of any suitable construction. Its arbor or shaft is extended through the box C and provided with a crank on the outside for imparting rotary motion to the windlass.

E designates a flexible ladder, which may have its sides made of cable or chain and its rungs made of metal. Preferably it will be made entirely of fire-proof materials. One end of this ladder is fastened to the arbor or shaft of the windlass, and by rotating the windlass the ladder may be wound up upon the arbor or shaft, between the heads of the windlass. At the front of the box C, or at the front of the roof of the building, a roller e will preferably be arranged to enable the ladder to move down over the wall A of the building with little resistance. As the ladder will be quite heavy, I preferably employ a counterbalance in connection with the windlass. I have shown a counterbalance consisting of a spring-detent F, which is fastened to one side of the box and engages with a toothed wheel F' , fastened on the arbor or shaft of the windlass. This detent will not prevent the rotation of the windlass in a direction to wind up the ladder. It is intended that when the ladder is lowered the bows B' B^2 B^3 will be adjusted to a horizontal position, so as to keep the ladder away from the wall A of the building. Preferably the lower end of the ladder will be fastened, and I have shown a hook G, extending from the building, for engaging the free end of the ladder. The ladder may be engaged with the hook before the bows B' B^2 B^3 are lowered, and then the lowering of these bows will put the ladder under such strain that it will be firmly held in position and precluded from swaying.

An important feature of my invention consists of a windlass H, which is journaled in

bearings with which the free end of the ladder is provided. As here shown, it is journaled in a frame H', attached to the free end of the ladder. This windlass may be provided
 5 with a crank for winding up a cord I, or equivalent device, which is attached to the windlass H. The free end of the cord I is provided with a weight J, which will be sufficiently heavy to unwind and lower the cord.
 10 Normally the cord will be wound upon the windlass H and the ladder E wound up upon the windlass D. Then all the parts, excepting the free end of the cord I and the weight J, will be within the box C. A detent will
 15 then engage with the windlass H and prevent it from rotating. As here shown, this detent consists of two pins K extending up into the box from a lever K', fulcrumed in the upper story of the building and capable of being
 20 adjusted to disengage the detent from the windlass by means of a cord K², extending to any convenient place—as, for instance, in hotels the cord might extend to the clerk's office, so that on an alarm of fire the clerk
 25 could disengage the detent. When the detent is made in the form illustrated, it may engage with two horizontally-extending pins h, extending from the outer sides of the windlass H.
 30 The weight J being beyond the front of the building, and therefore ready to descend by gravity, it is obvious that on the disengagement of the detent the weight will descend and lower the cord I in front of the windows
 35 $a' a^2 a^3$. This will enable anyone needing the fire-escape to reach the cord out of one of the windows and by pulling upon it lower the ladder. I deem it much better to lower the cord rather than lower the ladder on an alarm

of fire, because oftentimes the fire-escape will 40 not really be needed and the occupants of the building will be much less liable to fear than if the ladder were lowered.

It will be seen that by my improvement I provide a very simple and efficient fire-escape upon which anybody may descend to the sidewalk and upon which anybody may ascend from the street. 45

What I claim as my invention, and desire to secure by Letters Patent, is— 50

1. In a fire-escape, the combination of a windlass, a flexible ladder attached to and capable of being wound upon the windlass, a windlass carried by the free end of the ladder, a cord or its equivalent attached to and wound upon the windlass which is carried by the ladder, and means for lowering this cord automatically, and a detent for normally locking the windlass to which the cord is attached, substantially as specified. 55 60

2. In a fire-escape, the combination of a windlass, a flexible ladder attached to and capable of being wound upon the windlass, a number of hinged bows or frames arranged upon the wall of a building for holding the ladder away from such wall, a windlass carried by the ladder, a cord or its equivalent attached to said windlass, and a detent for normally locking the windlass to which the cord is attached, substantially as specified. 65 70

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LUE S. HODGDON.

Witnesses:

ANTHONY GREF,

WILLIAM A. POLLOCK.