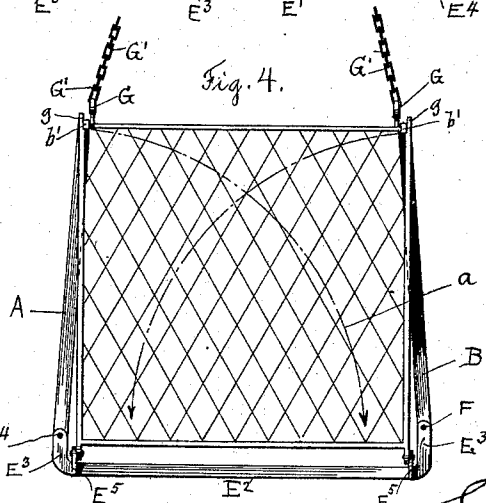
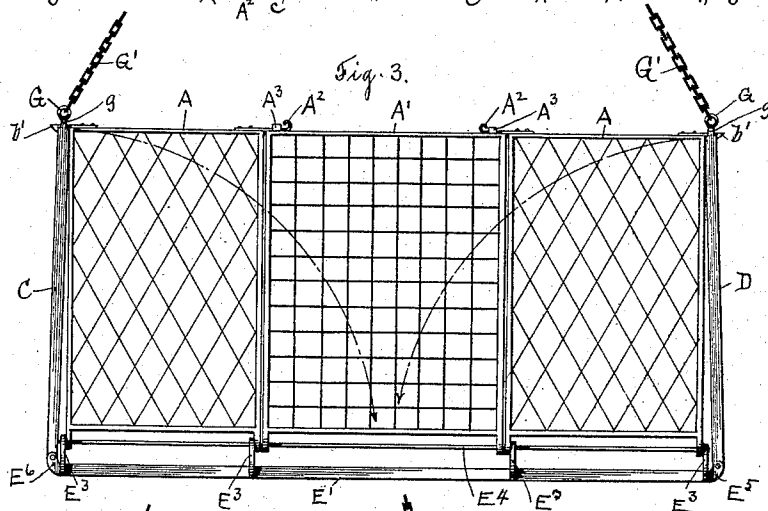
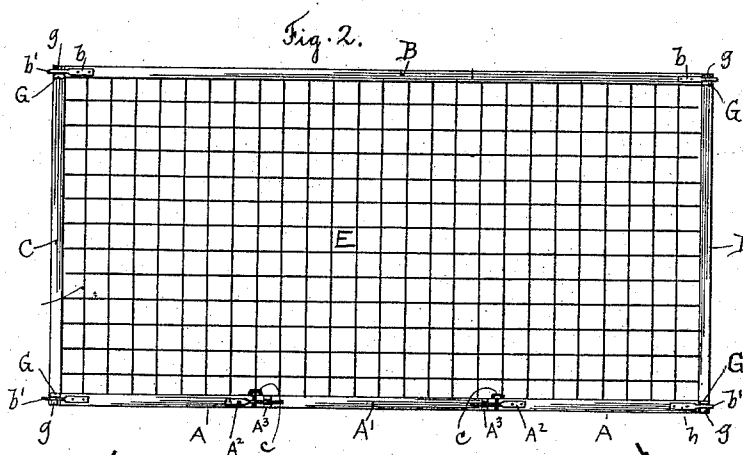
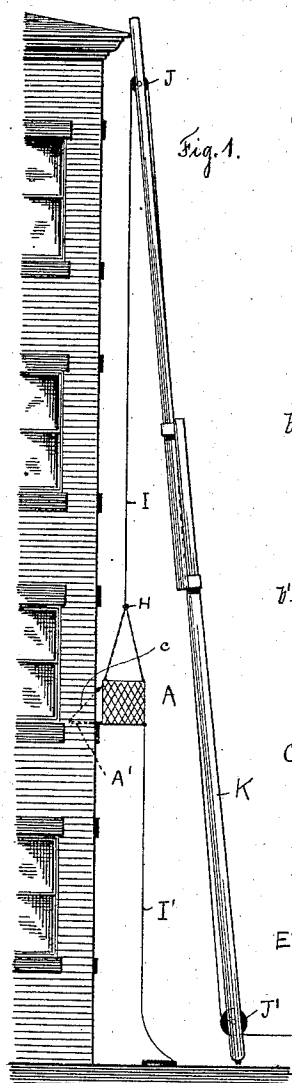


(No Model.)

G. H. LEE.
FOLDING SAFETY FIRE ESCAPE.

No. 470,689.

Patented Mar. 15, 1892.



Witnesses
Annie L. Grogan
David M. Hall

Inventor

George H. Lee,
By Thos. H. Dodge,
Attorney

UNITED STATES PATENT OFFICE.

GEORGE H. LEE, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO HIMSELF
AND DAVID WELCH, OF SAME PLACE.

FOLDING SAFETY FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 470,689, dated March 15, 1892.

Application filed October 13, 1891. Serial No. 408,731. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. LEE, of Worcester, in the county of Worcester and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Folding Safety Fire-Escapes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and the letters of reference marked thereon, forming a part of this specification, and in which—

Figure 1 represents a portion of the building and a ladder by which my improved fire-escape is supported and illustrates the manner in which it is used. Fig. 2 is a top plan view of my improved car or fire-escape as it will appear when ready for use. Fig. 3 is a front view of the same, showing the door, which can be lowered, so as to afford a passage into the interior. Fig. 4 represents an end view of the car.

To enable those skilled in the art to which my invention belongs to make and use the same, I will proceed to describe it more in detail.

The object of my invention is to provide for fire departments and others a fire-proof, cheap, simple, and compact fire-escape, and to this end I make a fire-escape substantially in the form of a collapsible box, the sides of which are made of grate-work and so arranged that when not in use it can be folded together, so that the four inclosing sides will swing toward the bottom.

E is the bottom of the car, made of network, which is attached to the side bars E' and end bars E².

Projecting from the sides of the bars E' are ears E³, which pivotally support the front side A of the box, having in its central portion the door A', which is also hung or pivoted on the common rod E⁴, held in the ears E³, and held closed and in line with the two side portions of the front A at the top by means of spring-catches A², finding resting places in grooves provided in the lugs A³, which are attached to the door, thus making the front side continuous from end to end.

The frame-bars E² are provided with ears E⁵ and E⁶, adapted to support the end frames

D and C of the fire-escape, which are adapted to swing inwardly, as indicated by the arcs in Fig. 3, and rest on the bottom of the escape.

It will be noticed by referring to Fig. 4 that the pivot-rod E⁴ of the front side A is somewhat lower than the pivot F of the rear side B, and this is done for the purpose of allowing the front side A to fold down toward the bottom of the box, as shown by arc a, Fig. 4, in which case it would rest upon the sides C and D, which are resting on the bottom, having previously been folded down, as indicated by the arcs shown in Fig. 3. The rear side B is then folded down and the fire-escape is ready to be stored away, necessitating only a small amount of room for its storage.

The front and rear sides A and B are provided at their ends with spring-catches b, having at their ends hooks b', adapted to engage with the outside of the side frames C and D. These hooks b' pass between the eyebolts G and projections g, both being formed at the tops of the sides of the frames C and D. Thus the side frames C and D come to rest against the ends of the sides A and B, and the hooks b' prevent any displacement or disengagement of the sides A and B with the frames C and D, respectively.

Secured to the eyebolts G are four chains G', having their upper ends united by a ring H, Fig. 1, to which the hoisting-cable I is attached and carried over the scored pulley J, and then around a sheave J', both being supported on a ladder K.

For the purposes of guiding the fire-escape into a proper position on the building I provide the guy-ropes I', which are attached to the bottom of the car and which also serve to keep the fire-escape away from the building when swinging about. When the escape is in use and is brought opposite a window of a building, the door A' is allowed to drop outwardly, as shown by dotted lines, Fig. 1, such downward movement being checked by chains c, which serve to hold the door in a horizontal plane, thus bringing the same nearly to a level with the bottom of the escape and rendering it possible for use as a bridge from the window-sill of the building to the escape.

By the use of wire netting or grating for making the car it is comparatively light, while

at the same time fire-proof and very strong, and as it can be folded up it occupies so little space that it can be carried with the fire-ladders or fire-trucks without inconvenience and the firemen can operate the same.

It may, when it is preferred to have the fire-escape a fixture of the building, be suspended from an ordinary hook on a projection from the building, or it may be attached to a common swinging crane, which, as is well known, swings in and out from the building when used for raising merchandise or other material.

Its cheapness, taken in connection with its compactness when not in use, renders it unobjectionable for use even for private dwellings and ordinary business blocks, advantages of great importance from a practical point of view.

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

1. The combination, with the grated bottom E of the fire-escape car having supporting-

bars E' E², provided with the ears E³, E⁵, and E⁶, as described, of the pivot-rods F and E⁴, folding frames C D, and folding side frames A and B, said parts being constructed and relatively arranged for joint operation substantially as and for the purposes set forth.

2. The combination, with the front and rear sides A and B of spring-catches *b*, provided with hooks *b'*, of the frames C and D, provided with eyebolts G and projections *g*, said parts being relatively arranged for operation as and for the purposes set forth.

3. In a fire-escape, the combination, with one or more of the inclosing sides, of an infolding door also adapted to be swung outwardly and means whereby such outward movement is checked when the door has reached a horizontal position, substantially as and for the purpose set forth.

GEORGE H. LEE.

Witnesses:

THOS. H. DODGE,
ANNIE L. GROGAN.