

(No Model.)

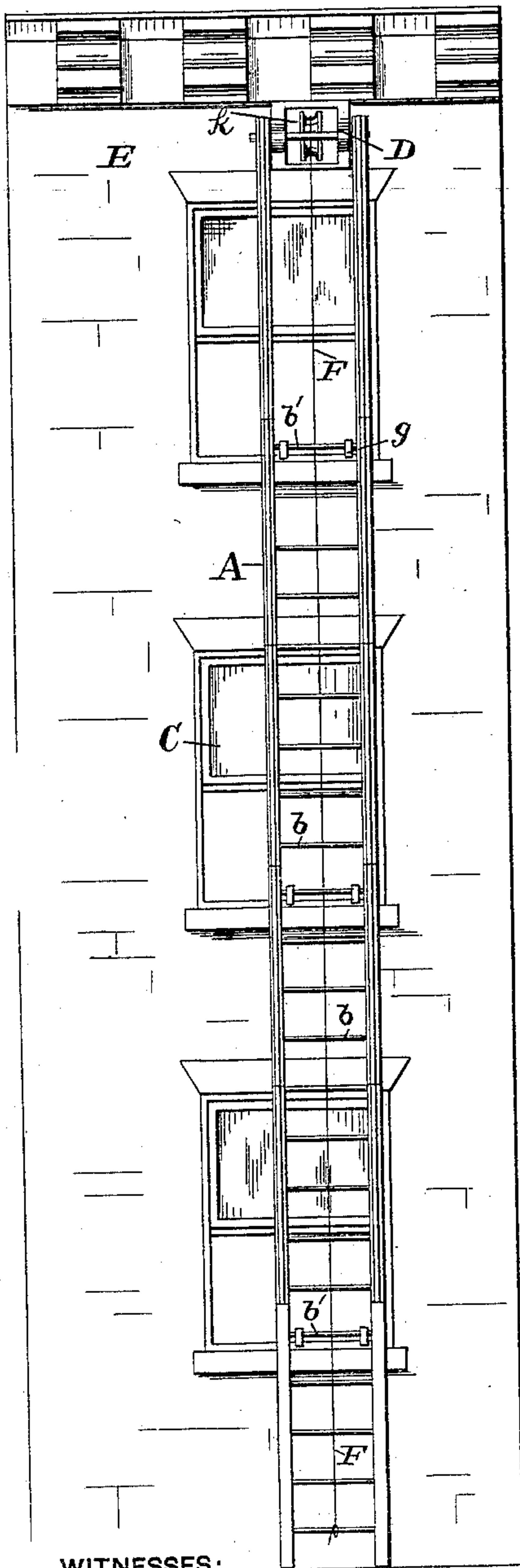
2 Sheets—Sheet 1.

W. R. PRICE.
FIRE ESCAPE.

No. 318,391.

Patented May 19, 1885.

Fig. 1.

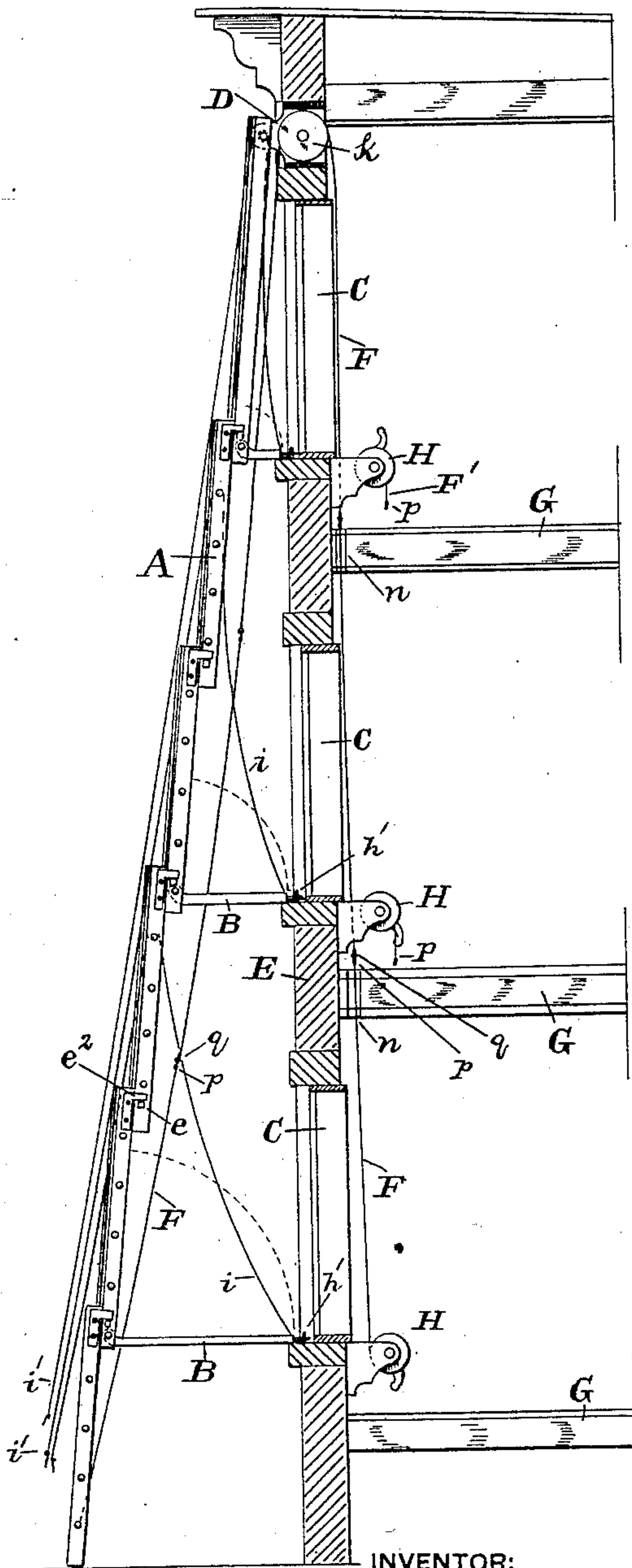


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Fig. 2.



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Fig. 3. A perspective view of a window frame assembly. The assembly includes a vertical frame member (F) and a horizontal frame member (G). A window pane (A) is shown in an open position, revealing a mesh screen (f') and a handle (h'). A handle (H) is attached to a pulley mechanism (P) which is mounted on the frame member (F). The pulley mechanism (P) is connected to a cord (n) that runs over the pulley and is attached to the handle (h'). The handle (H) is shown in a raised position, indicating the window is open. The label 'Fig. 3.' is located at the top left of the diagram.

Fig. 4.

A perspective view of a second embodiment of the device. It shows a base block with a longitudinal slot and a smaller block with a matching protrusion. The base block has a small rectangular feature labeled 'd' on its front face. The smaller block has a feature labeled 'c' on its front face. Both blocks are labeled 'A'.

Fig. 5. Fig. 6.

The diagrams illustrate a mechanical assembly, likely a vertical frame or support structure, shown in two views: Fig. 5 (left) and Fig. 6 (right).

Fig. 5 (Left View): This view shows a vertical frame structure. It consists of two main vertical supports, labeled *A* (top) and *B* (bottom). A central vertical member, labeled *g*, is positioned between the supports. A horizontal member, labeled *f*, is attached to the central member. A cross-hatched rectangular area, labeled *f'*, is located below the horizontal member *f*. A small circular component, labeled *h*, is attached to the central member *g*. A small rectangular component, labeled *e*, is attached to the bottom support *B*. A small rectangular component, labeled *b*, is attached to the top support *A*. A small rectangular component, labeled *b'*, is attached to the bottom support *B*.

Fig. 6 (Right View): This view shows a side profile of the assembly. It features a vertical member, labeled *A*, which is supported by a base, labeled *B*. A horizontal member, labeled *f*, is attached to the vertical member *A*. A small circular component, labeled *h*, is attached to the vertical member *A*. A small rectangular component, labeled *e*, is attached to the base *B*. A small rectangular component, labeled *b*, is attached to the top of the vertical member *A*. A small rectangular component, labeled *b'*, is attached to the base *B*.

Fig. 6

Fig. 8.

The diagram illustrates two views of a twisted wire or cable. The left view shows a section of the wire with a central core (P) and an outer twisted layer (F). A hook (q) is attached to the top. The right view shows a similar section with a hook (P) attached to the top.

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UNITED STATES PATENT OFFICE.

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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 318,391, dated May 19, 1885.

Application filed March 25, 1885. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. PRICE, a citizen of the United States, residing at Still Pond, in the county of Kent and State of Maryland, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification.

My invention relates to a fire-escape for buildings; and it consists in certain novel combinations of parts and novel features of construction, which will first be described, and then designated in the claims.

The accompanying drawings illustrate the invention.

Figure 1 is a front elevation, showing the sectional ladder in position for use. Fig. 2 is a side elevation of same, the building-wall being shown in section. Fig. 3 is a sectional elevation of a building-wall, inside view, showing the position of the rope as it passes through the floors and the windlass on each floor. Fig. 4 shows two pieces of ladder-rail provided with the slides. Fig. 5 is a front view of one section of the ladder, showing a hinged platform folded against it. Fig. 6 is an edge view of two sections of the ladder and a hinged platform between them. Fig. 7 shows an edge view of the ends of two ladder-sections and the stop device. Fig. 8 shows the rope-coupling device.

Briefly stated, the fire-escape consists of a ladder made in sections which slide on each other, the upper section being jointed and supported in a suitable manner to the front wall of the building, windlass within the building; and a sectional rope leading from one windlass to the lowermost ladder-section, by which arrangement the ladder, when not in use, may be folded and supported at an elevated position on the building-wall, and when desired for use may be lowered by a person within the building and from any floor thereof.

The letter A designates the rails of the ladder, which has rungs b. The ladder is made in short lengths or sections, so as to occupy, when folded, as little vertical space as possible. Each section of ladder has on the top or bottom of its rails either a T-shaped tongue, c, (see Fig. 4,) or a corresponding-shaped groove, d, in which the T-shaped tongue may slide. Where the tongue is on one section, the

groove must be on the adjoining one. By this means, as will be readily understood, one section may slide lengthwise of another section. The tongue and groove constitute at once a slide and a connection. The lower end of each section has a lug, e, projecting at each side. This lug may be formed, as here shown, by a head on the end of the lowermost rung, b'. The upper end of each section has a right-angled plate, e', one arm, e², of which laps over on the rail of the adjoining section, and is in position to take over the lug e thereon, as seen in Fig. 7. This lug and right-angled plate constitute the stop device to prevent the two sections from separating or sliding apart.

A platform consists of two rails, B, connected by cross-rods f, upon which is a covering of woven wire, f'. One end of the platform has two suitable irons, g, by which it is hinged to the lowermost rung, b', of one ladder-section. (See Figs. 5 and 6.) The width of the platform is less than that of the ladder, whereby the platform may take position against the ladder-rungs and between the two rails. By this construction the hinged platform may be folded against the section of ladder to which it is hinged, and then this section may be slid lengthwise on the other or next upper adjoining section, thereby bringing the said platform between the two sections, as shown. The free end of each platform has one or two rings or eyes, h, which, when the platform is horizontal, take over or engage with pins or hooks h', attached to the window-sill.

In order to raise the hinged platform from its horizontal position and fold it against the ladder, a rope, i, has one end attached to the free end of the platform, and then passes over an upper rung on the same ladder-section, and thence down. By drawing on the lower end, i', of this rope the free end of the platform will be released from the pins or hooks h' on the sill, and the platform will take the position shown in Fig. 6. By means of this platform, when it is in the position shown in Fig. 2, the sectional ladder is securely stayed or braced, and persons may pass thereon from the window C of the building to the ladder. A suitable ladder-support, D, projects at the front of the wall E of the building. To this support the topmost ladder-section is attached

in such manner as to form a joint, whereby the ladder may, when the sections are folded or slid together, hang vertically therefrom, resting against the wall E, or may, when the sections are extended to the ground, have its lower end drawn away from the wall, as shown in Fig. 2.

2. A pulley, *k*, is fixed in the building-wall above the ladder-support D, and a rope, F, has one end attached to the bottom of the lowermost ladder-section (see Fig. 2) and passes up over the pulley *k* in the wall, and from thence down inside the building. Each floor G of the building has a hole or slot, *n*, for the passage of the rope, so that the rope may pass down to the lower floor. A windlass or winding-crank, H, is attached to the wall above each floor, and the rope F passes down alongside of each windlass, and normally is connected only with the lowermost windlass.

2. Each windlass on the several upper floors is provided with a pawl and ratchet to hold it from turning, and also with an independent supply of rope, F', sufficient to lower or extend the ladder from its folded and elevated position to the ground. The end of the supply of rope on the windlass has one part, *p*, of a coupling device. The rope F, which is normally connected only with the lowermost windlass, is in sections of suitable length, which sections are joined together by a coupling device, *p q*. (See Figs. 3 and 9.) The arrangement is such that when the ladder-sections are slid together and supported at an elevated position against the wall E, the rope F is the sole means which retains the ladder-sections in said elevated position, and when thus elevated one of the rope-coupling devices *p q* will have position just above each windlass, as seen in Fig. 3. By this construction and combination of parts the elevated ladder may be lowered or extended to the ground at any time by a person on any floor of the building. To

lower the ladder, it is only necessary for a person on one of the upper floors to take the end of the independent supply of rope F' and connect the part *p* of the coupling device on said end with the coupling part *q* on the main rope F, and then disconnect from the same coupling part *q* that portion of the main rope which leads to the floor below. Having thus changed the connection of the rope F from the lowermost windlass to the windlass on any one of the upper floors the elevated ladder may be lowered by unwinding the independent supply of rope F'.

Having described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination of a ladder made in sections which slide lengthwise on each other, a ladder-support to which the topmost ladder is attached, a rope in sections joined by a coupling device, and having one end attached to the lowermost ladder-section and passed up over an elevated pulley, and thence down, and two or more windlasses, one on each floor of a building, each provided with an independent supply of rope, F', for connection with the said sectional rope, as and for the purpose set forth.

2. The combination of a ladder made in sections which slide lengthwise on each other, a platform hinged by one end to one of the ladder-sections, and a rope, *i*, having one end attached to the free end of the platform and passed over an upper rung on the ladder-section to which it is hinged, and thence down, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM R. PRICE.

Witnesses:

JOHN E. MORRIS,
WM. B. NELSON.