

(No Model.)

J. H. FRAZEE & G. M. CULVER.

FIRE ESCAPE.

No. 285,744.

Patented Sept. 25, 1883.

Fig. 1.

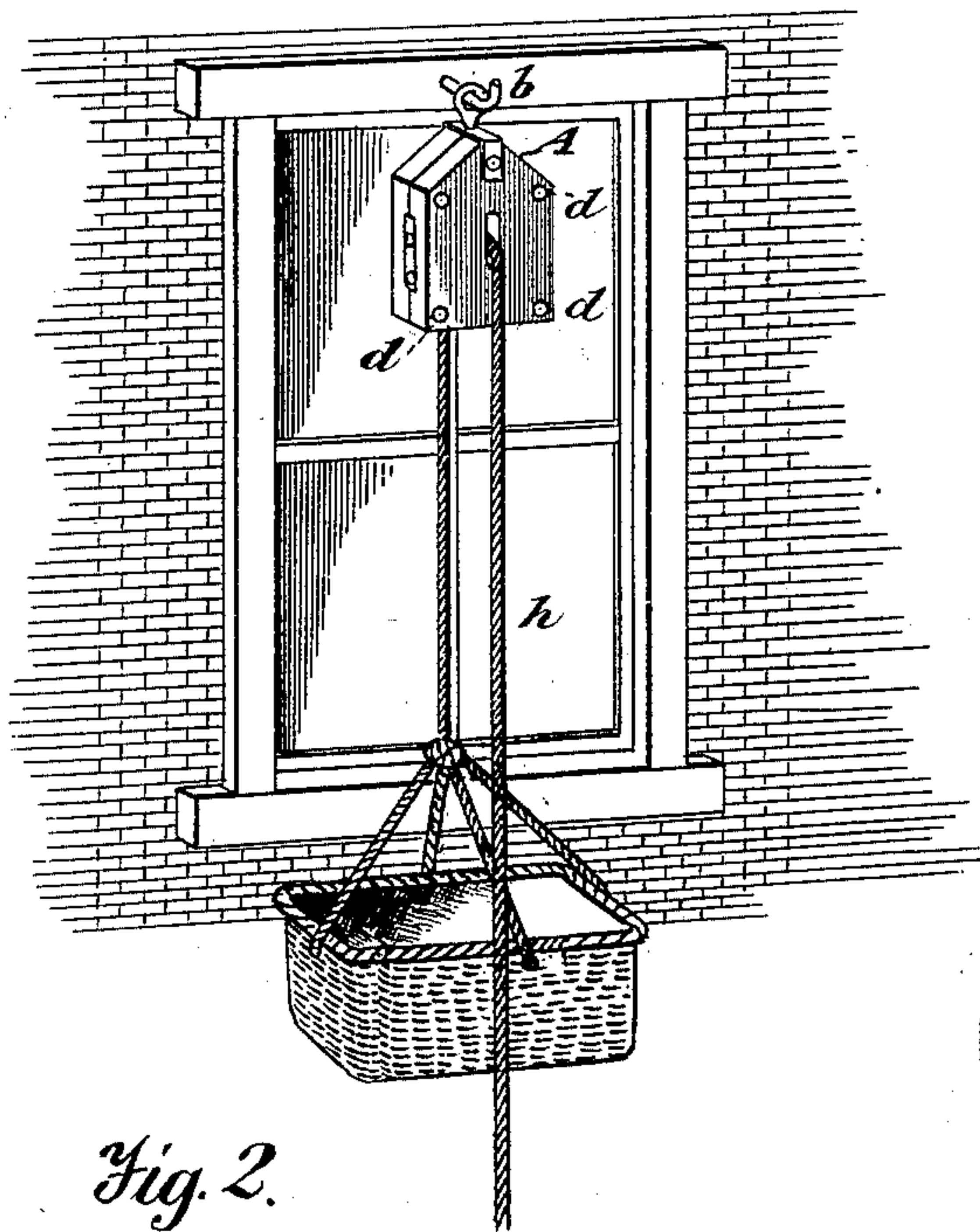
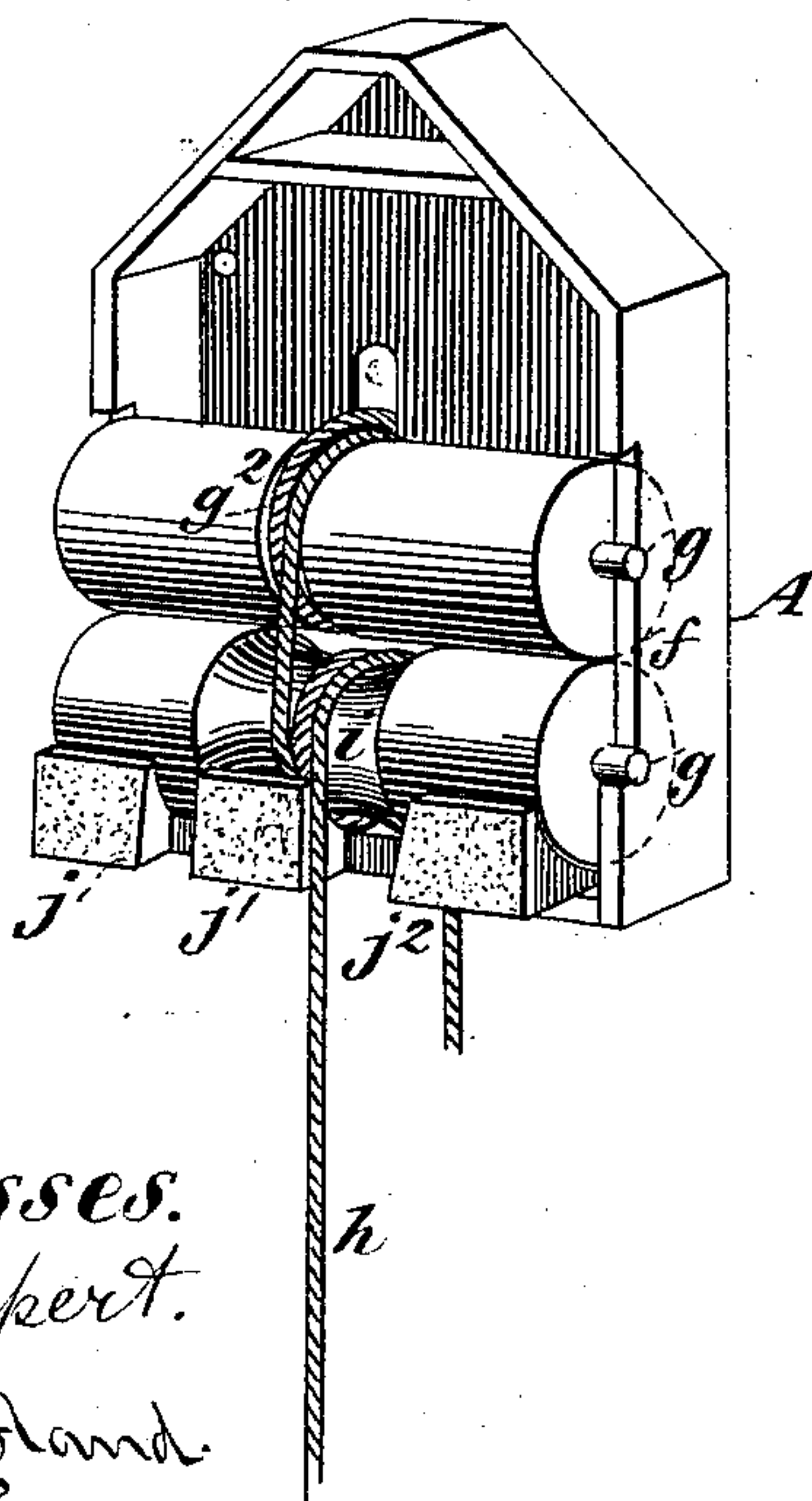
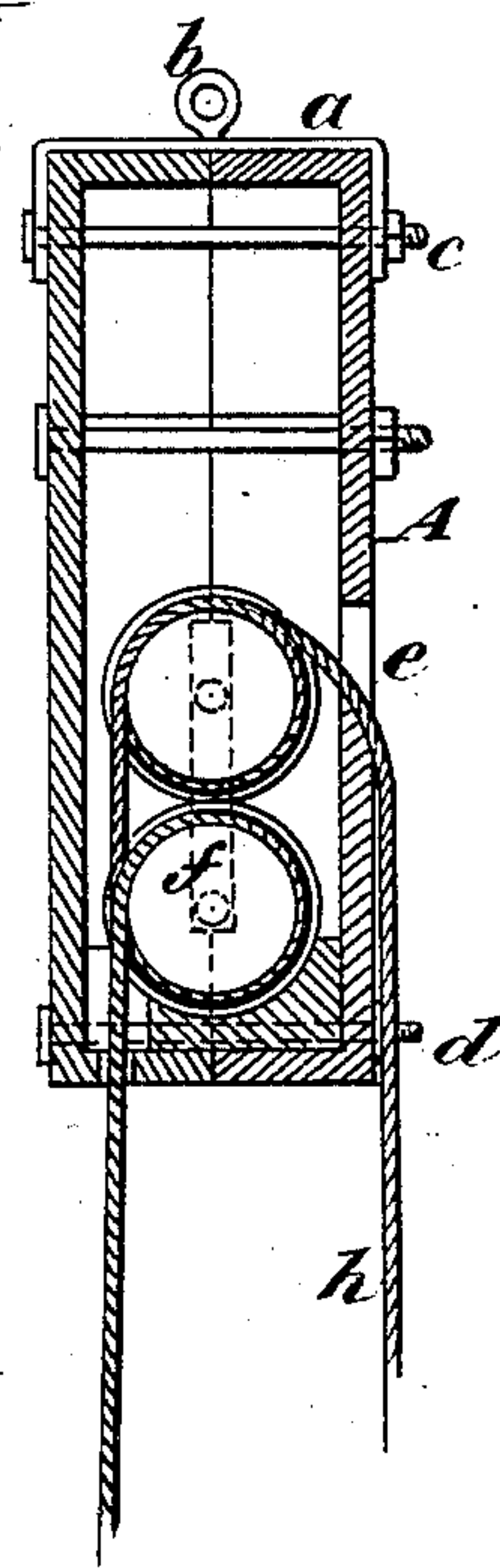


Fig. 2.



Witnesses.
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Fig. 3.



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UNITED STATES PATENT OFFICE.

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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 285,744, dated September 25, 1883.

Application filed February 15, 1883. (No model.)

To all whom it may concern:

Be it known that we, JAMES H. FRAZEE and GEO. M. CULVER, citizens of the United States, residing at Rushville, in the county of Rush and State of Indiana, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification, reference being had therein to the accompanying drawings.

Our invention relates to improvements in fire-escapes, and has for its object construction of a fire-escape that can be readily attached to the top of a window, door, or to the eaves of a building, or to a projecting beam extending outward at some convenient point below the eaves. Another object is to provide by the arrangement of the various parts means by which persons descending from the upper part of a building can lessen or accelerate the downward movement at will or stop at any point desired. We attain these objects by the peculiar formation and arrangement of devices, which will be more fully set forth and pointed out in the specification and claims.

Referring to the drawings, Figure 1 represents a perspective view of our improved fire-escape, showing the same attached to a window-sill, with rope and depending basket. Fig. 2 shows the rollers, rope, and rubber brakes in position, with one-half of box removed. Fig. 3 is a central cross-section, showing the position of rollers, ropes, and apertures in the box through which the rope passes.

Similar letters refer to similar parts throughout the drawings.

Referring to the drawings, A represents an angular box, its upper end converged to near a central point, to which is attached strap *a* and hanging-eye *b*, by which the device is suspended. Strap *a* passes over the converged end of box A, and its outer ends are turned inward at right angles and perforated to receive the bolt *c*, that is formed to pass through said perforations and through the box to hold said strap *a* in place.

At the four corners of box A bolts *d d d d*, being screw-threaded and having nuts, pass through perforations in the same and serve to hold the two halves of said box in place.

The outer face of box A is pierced near its center with an elongated slot, *e*, and on each

side with similar slots, *f f*. Said box A is formed of two half-sections similar in shape and size, and is held together by the bolts *d d d d*.

Two rollers, B and C, are formed of equal lengths and of equal diameters, and having bearing or guide pins *g g g' g'*, extending outward from the ends of each. A narrow shallow groove, *g²*, is formed around roller B at a point about midway between its ends, the purpose of which is to receive rope *h*, that passes once around roller B, within the limits of groove *g²*. A groove, *i*, is also formed around roller C, of sufficient width and depth to permit of rope *h* passing two or more times around the same. Said groove *i* is formed centrally around roller C and nearly opposite groove *g²* in roller B.

Below roller C, and resting on the bottom of box A, are three brake sections or bearings, *j j' j²*, constructed of rubber or other suitable material, and formed concave on their upper faces to conform to the size and shape of roller C. Said brake-sections are connected to each other by joining plates of the same or other material. Said brake sections or blocks are located one at each end of roller C and one at the center of the same, on the under or lower face of roller C, and between said roller and the inner face of the bottom of box A. The purpose of this construction is to receive the roller C and form a bearing for the same, and against which, by means of the rope *h* and the roller B, the speed of the descending basket or weight on the end of rope *h* is regulated.

The operation is as follows: When ready for use, the rope *h* is passed up through an aperture in the bottom of box A, two or more times around the grooved part *i* of roller C; thence upward and once around groove *g*; thence out through the slot *e* in the outer face of box A, from this point to the ground, or coiled up loosely in the basket D, which is attached to the opposite end of rope *h*, or the rope is put in the position described before the two half-sections of box A are joined together. When joined together as described, the rollers and rope assume the position shown in Fig. 2. The box A is then suspended above a window, or at any desirable point, when the operator steps into the basket, seizes hold of the outside rope, as shown in Fig. 1, and with very little force

lowers himself or weight to the ground. An expenditure of eight or ten pounds retaining force exerted on the outside rope or the end of the rope passing through slot *e* will control at 5 will a descending weight in the basket or attached to the end of the rope passing out of the aperture in the bottom of box A, and permit the operator and passengers to land in safety from the highest buildings.

10 Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a fire-escape, a box formed with openings through its sides and bottom, and containing rollers arranged one above another, 15 the lower roller resting on flexible bearings, said rollers operated by a rope passing over and around them and through openings in said box, substantially as and for the purpose set 20 forth.

2. In a fire-escape, the box A, formed in two sections, and having openings, as described,

the rollers B and C, having grooves and guide-pins, said pins adapted to move vertically in openings in said box, the flexible sections supporting roller C, as shown, and a single operating-rope passing around said rollers and through openings in said box, the whole arranged and operating substantially as shown and specified. 25 30

3. The combination of the box A, formed of two equal sections joined together with bolts and nuts, as described, and having openings and strap-eye, as shown, with rollers B and C, rubber bearings *j j' j''*, and rope *h*, arranged 35 and operated substantially as shown and specified.

In testimony whereof we affix our signatures in presence of two witnesses.

JAMES H. FRAZEE.

GEORGE M. CULVER.

Witnesses:

PAUL J. BEACHBARD,
LEONIDAS LINK.