No. 682,869. Patented Sept. 17, 1901.

R. HAMMERLY.

FIRE ESCAPE.

(Application filed Apr. 12, 1901.)

(No Model.)

Fig:1.

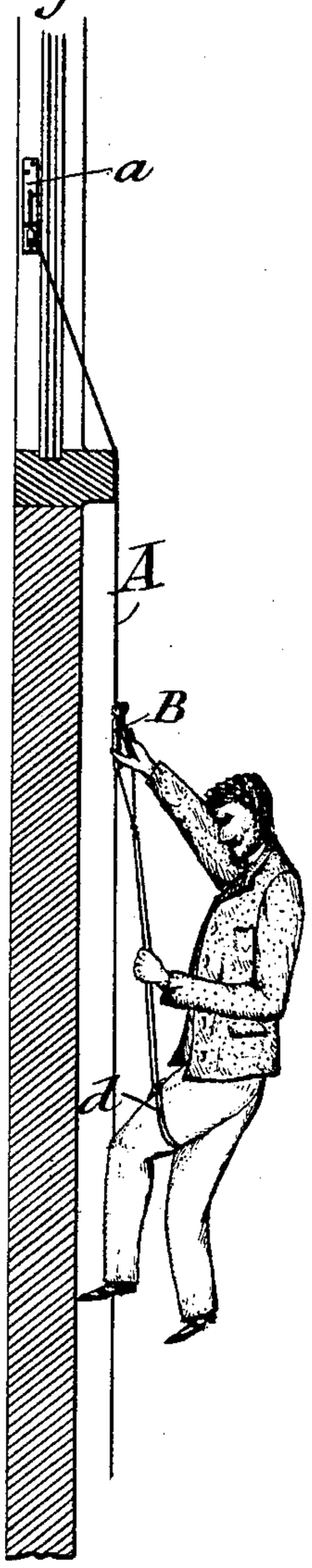


Fig:2.

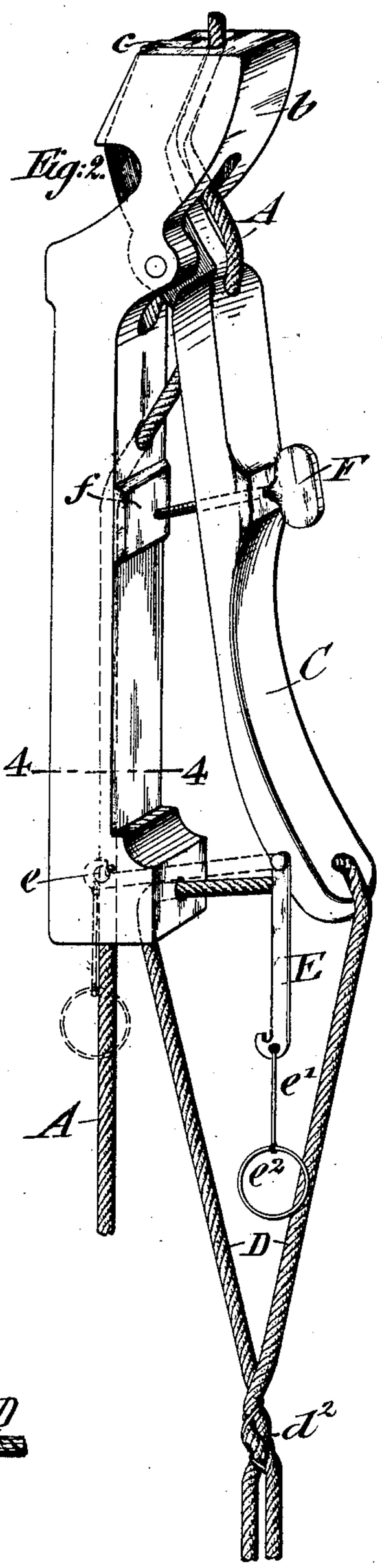


Fig:3.

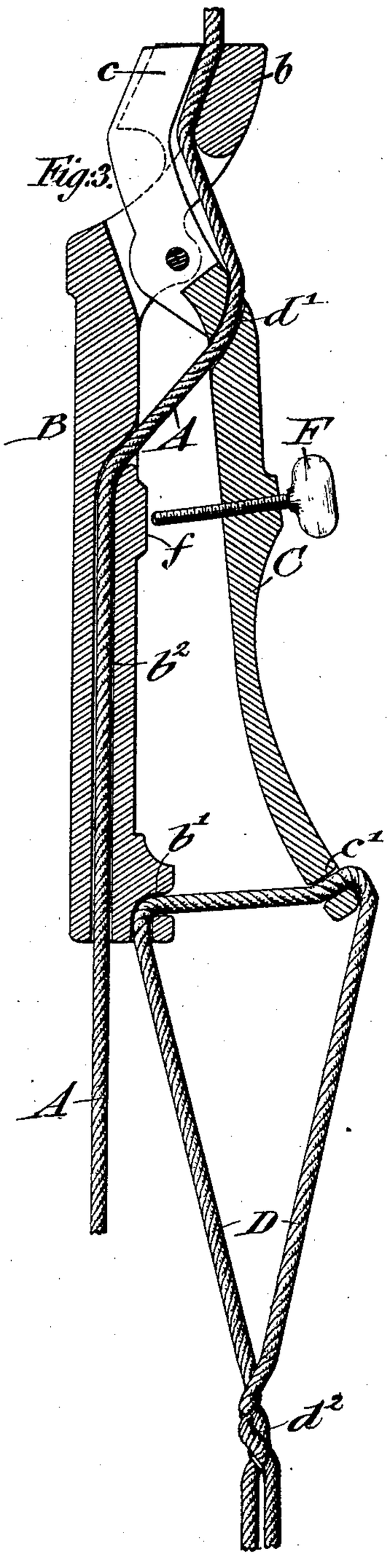
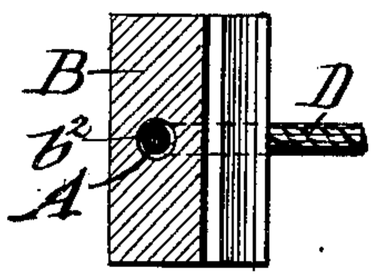


Fig:4.



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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 682,869, dated September 17, 1901.

Application filed April 12, 1901. Serial No. 55,584. (No model.)

To all whom it may concern:

Be it known that I, RICHARD HAMMERLY, a citizen of the United States, residing in New York, borough of Manhattan, in the State of New York, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification.

This invention relates to an improved fire-escape of that class in which the descent is controlled by the friction of a sliding member with a stationary rope suspended from the window or other point of support upon the building; and the invention consists of a fire-escape comprising a main rope, a slide-piece guided on said rope and provided at its upper end with a jaw engaging the same, and a clamping-lever fulcrumed to said slide-piece and provided with a jaw coöperating with the jaw of the slide-piece and with a perforation, said main rope passing through said perforation in its passage between the slide-piece and the clamping-lever; and the invention consists, further, in certain details of construction and combinations of parts, which will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side elevation of my improved fire-escape shown in use. Fig. 2 is a perspective view of the sliding member of the same. Fig. 3 is a vertical central section through said sliding member; and Fig. 4 is a horizontal section on line 4 4, Fig. 2.

Similar letters of reference indicate corresponding ports.

Referring to the drawings, A represents a suspension-rope of suitable length as required by the height from the ground of the room in which the escape is placed. The end of the rope is secured to a suitable stationary hook *a* when required for use, said hook being applied to the window-frame or any other suitable point of support. On the rope A is placed a slide-piece B, which is provided with a jaw *b* at its upper end, said jaw having a recess in which is guided the rope A. To the upper part of the slide-piece B is fulcrumed a clamping-lever C, which is provided at its upper end with a jaw *c*, that enters into the recessed jaw of the slide-piece, as shown in Fig. 2, thereby coöperating with the same to exert a frictional pressure on the rope. The lower end of the slide-piece B and the lower end of the lever C are provided with openings *b'* *c'*, respectively, through which is passed a suspension-rope D, provided at its lower end with a strap *d*, stirrup, or other suitable suspension device, the two descending portions of the rope D being connected at a point not far below the slide-piece and lever, as at d^2, thereby forming a loop which tends to draw the slide-piece and lever together with a force proportional to the weight of the person using the fire-escape. The rope A is conducted from the recessed jaw *b* through an opening below the jaw and a curved opening *d'* in the lever C and through a longitudinal bore b^2 in the body of the slide-piece, as shown clearly in Fig. 3. To the lower end of the lever is pivoted a locking-hook E, which may be applied to a headed stud *e* at the lower end of the slide-piece, so that the slide-piece and lever can be locked together. To the outer end of the locking-hook E is attached a link *e'*, having at its opposite end a ring e^2, so that by pulling the ring and link the hook is released from the stud *e*, and thereby the sliding member rendered ready for use in controlling the descent along the rope A. The lever C is provided with an adjusting-screw F, having a thumb-piece at the outer end and abutting at its inner end against a raised portion of the slide-piece, said screw serving as a stop for preventing too great pressure on the rope by the jaws and permitting the adjustment of the device for persons of different weights. The screw F is so set that when the hook E is in engagement with the stud *e* the inner end of said screw is slightly removed from the abutment *f*, as shown in Fig. 3, thereby permitting sufficient clamping action on the rope A to control the descent, but preventing such great friction with the rope as would be liable to burn or break the same. As the degree of friction required to control the descent varies, being greater for a heavy person than for a child or person of light weight, the screw F furnishes a ready means for adapting the fire-escape for use by a person of any weight. The slide-piece and the clamping-lever are preferably made of suitable cast metal, such as galvanized cast-iron.

My improved fire-escape is used as follows: The rope A is applied at its upper end to the

hook *a* of the window-casing and the rope thrown out of the window, so that it drops down to the ground. The person using the escape then applies the suspension device *d* either to the waist or leg of the body, mounts the window-sill, and suspends himself from the rope A. During this time the jaws of the slide-piece and lever are held in locked position immovably on the rope A by the locking-hook E, so that there is no possible chance of slipping on the rope. As soon as the person desires to descend the ring e^2 is pulled, thereby releasing the hook from the headed stud *e*. The left hand grasps the suspension-rope, while the right hand grasps the slide-piece and lever, so as to apply the jaws to the rope and regulate the speed of descent. The weight of the person tends, by means of the loop of the rope D, to close the jaws, thereby exerting pressure on the rope in proportion to the weight of the person, which pressure is more or less increased by the action of the hand on the lever, so that the speed of descent is fully within control.

My improved fire-escape can be furnished at a comparatively low price, is always ready for use, and occupies but little storage-room. It is strong and reliable in operation and affords a ready and safe means of escape from fire.

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

1. A fire-escape, consisting of a slide-piece provided with a longitudinal bore and at its upper end with a jaw, a clamping-lever fulcrumed to said slide-piece and provided with a jaw coöperating with the jaw of the slide-piece, and with a perforation, a main rope passing successively through the bore of the slide-piece, the perforation of the clamping-lever, and between said jaws, and a suspension-rope connected with the slide-piece and clamping-lever, substantially as set forth.

2. A fire-escape, consisting of a slide-piece provided with a longitudinal bore and at its upper end with a jaw, a clamping-lever fulcrumed to said slide-piece and provided with a jaw coöperating with the jaw of the slide-piece, and with a perforation located above the upper end of said bore and between the same and the jaws, a main rope passing through said bore and perforation, and between the jaws, a suspension-rope secured to the slide-piece and the clamping-lever, a pin on the slide-piece, a locking-hook pivoted to the clamping-lever and engaging said pin, means attached to said locking-hook for operating the same, and an adjusting-screw turning in the clamping-lever and bearing against the slide-piece, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

RICHARD HAMMERLY.

Witnesses:
PAUL GOEPEL,
GEORGE GEIBEL.