(No Model.)

R. G. DALPHIN.

FIRE ESCAPE.

No. 501,767. Patented July 18, 1893.

Fig 1

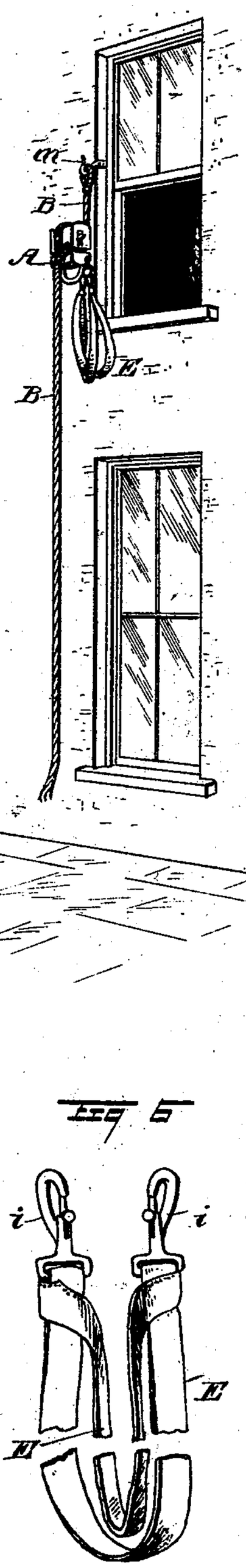


Fig 2

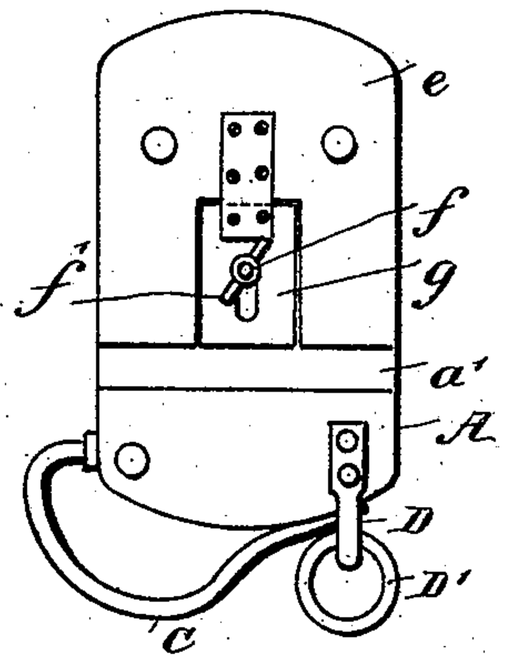
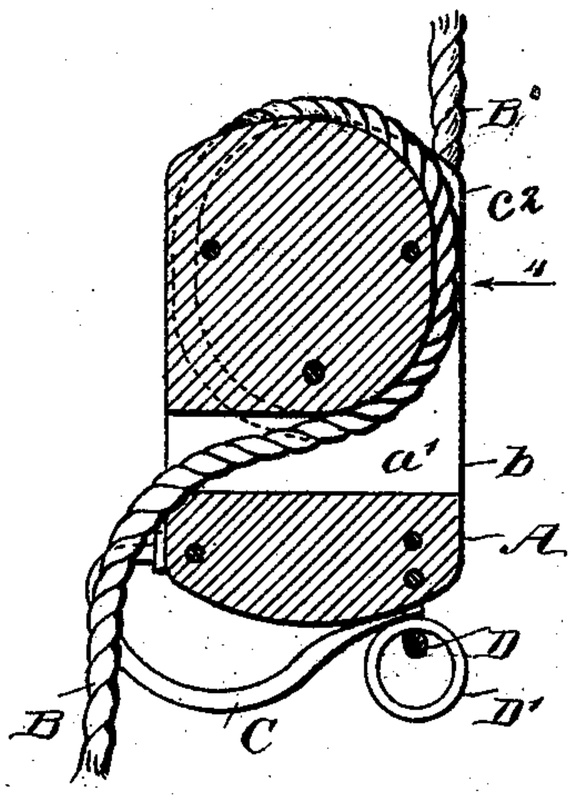


Fig 3



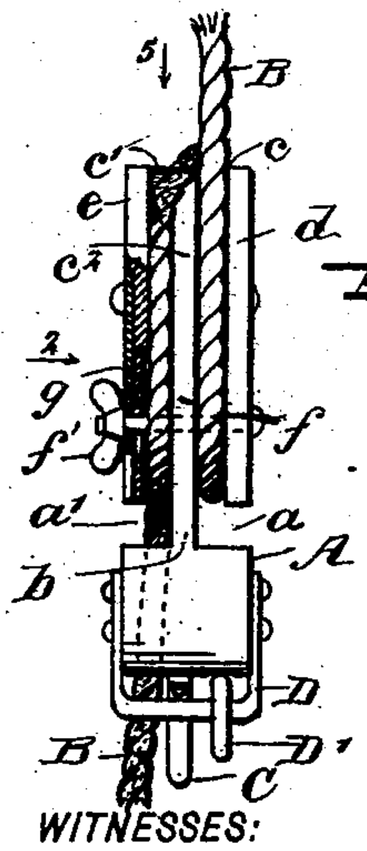


Fig 4

Fig 5

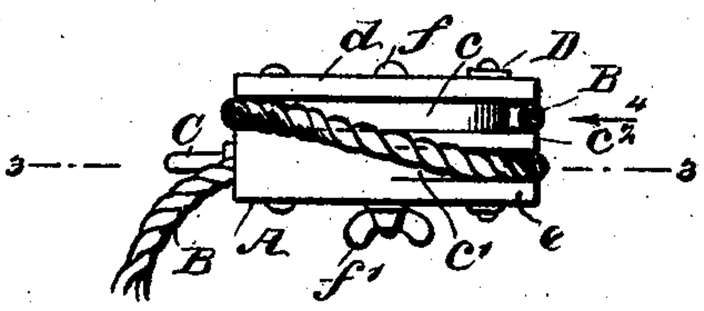


Fig 6

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ROBERT G. DALPHIN, OF MALONE, NEW YORK.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 501,767, dated July 18, 1893.

Application filed March 25, 1893. Serial No. 467,610. (No model.)

To all whom it may concern:

Be it known that I, ROBERT G. DALPHIN, of Malone, in the county of Franklin and State of New York, have invented a new and useful Improvement in Fire-Escapes, of which the following is a full, clear, and exact description.

This invention relates to improvements in portable fire escapes, and has for its object to provide a simple, practical, and inexpensive device of the character indicated, which will be adapted for use as a safe, convenient and expeditious means, for the escape of an inmate from the window of a burning building or one threatened by fire.

To this end my invention consists in the construction and combination of parts, as is hereinafter described and claimed.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar letters and figures of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the improved fire escape, hung on a building at a window and ready for use. Fig. 2 is an enlarged detached side view of an essential part of the improvement, in the direction of arrow 2 in Fig. 4. Fig. 3 is a sectional side view of a portion of the device on line 3—3 in Fig. 5. Fig. 4 is an edge view of parts opposite the arrow 4 in Figs. 3 and 5. Fig. 5 is a plan view opposite the arrow 5 in Fig. 4; and Fig. 6 is a detached and broken perspective view of a sling seat that is a part of the device.

The invention briefly considered, comprises a peculiarly formed suspensible friction block, a pendent rope frictionally engaging said block and hung by one end from the house wall near a window, and a flexible seat suspended from the block.

The friction block A is formed of wood or metal of suitable dimensions for efficient service, and as shown is a substantially rectangular piece curved on top and bottom edges, its length being in excess of its breadth and thickness.

There are two opposite grooves a, a', formed in the block A of an equal depth, leaving a wall b remaining, which grooves are horizontal when the block is in position for use. Above the cross grooves a, a', in the edge of the block that is opposite the arrow 4 in Figs. 3 and 5, two vertical parallel grooves c, c', are formed, at such a distance apart, as will permit a flange c^2 to intervene, said flange connecting with the wall b, being of an equal thickness therewith, and in effect an upward extension of said wall. The groove c, is extended over the top of the block and downwardly on the opposite edge of the latter, intersecting the cross groove a, that it is directly above, thus producing a continuous groove in the block, the bottom wall of said groove being of an oval contour as shown in Fig. 3, an outer flange d, resulting from the formation of the groove c. The groove c' is parallel with the groove c, and extends from the cross groove a', terminating at the top of the block A, said groove c', gradually decreasing in depth near the apex of the block, where it vanishes. The formation of the groove c', affords a side flange e, that is parallel with the flange c^2, the bottom of the channel c', having a semi-oval form that adapts it to receive a rope such as B, and avoid excessive frictional contact therewith.

On the side of the block A that has the marginal flange e, a recess is cut for the reception of a spring clamping plate g, the dimensions of the recess and thickness of the portion of the plate that is secured to the block A, allowing the latter to slightly vibrate above the cross groove a' on this side of the block, when the plate is secured in place thereon at its upper end, and is adjusted by the bolt f and winged nut f', that are adapted to clamp the plate. The bolt is fixed by one end in the block and passes through a short longitudinal slot in the portion of the plate g, that is in the recess of the block which permits a vibratory action of the spring plate to be produced. Below the cross grooves a a', the block A is solid, and a looped handle C is secured by its ends to one edge and the bottom wall of the block so as to project below the latter.

A hanger loop D is provided for the connection and support of the flexible seat piece E, with the block, said loop being secured by its ends so as to depend below and transversely of the block as shown in Fig. 4. On the loop D, a ring D′ is preferably located for the connection of snap hooks i therewith,

the latter being of ordinary form and attached to the ends of the flexible bands E, which are in duplicate, and when connected by their hooks to the ring, hang pendent from the block A, as shown in Fig. 1, where the entire device is represented as hung from a hook *m*, that projects from a house wall close to a window, ready for service.

To apply the rope B, to the block A, an end portion having a ring eye on it that engages the hook *m* is allowed to project above the block, and at a proper point from said end the rope is coiled in the continuous groove or channel *c*, *a*, and after encircling the block is diagonally crossed at the apex of the latter, so as to enter the channel *c'*, trending downwardly therein and across in the groove *a'*, to hang pendent from the block over a rounded corner of the latter, as shown in Fig. 3, the length of the rope being sufficent to allow it to nearly touch the ground below the window, and it will be seen that the cross grooves *a*, *a'*, greatly facilitate the proper disposition of the rope B, in the grooves *c*, *c'* of the block.

When there is occasion to use the fire escape, the person about to descend from the window of the building where the device is suspended, draws the seat piece E, upon the window sill, and introduces his or her lower limbs into the loops of the flexible bands, that are then so disposed as to engage the posterior of the operator. The seated person now manipulates the winged nut *f'*, which will press the clamping plate *g*, upon the portion of the rope B, that is located in the cross groove *a'*, and cause it to frictionally engage the wall *b;* the operator now swings clear of the window sill, and having previously grasped the handle C, and pendent rope B, with one hand, controls descent by a manipulation of the winged nut *f'*, so that an easy, safe and comfortable descent from the window of the building is effected.

It is evident that if the device is lowered from an upper window, it may be used as a means for descent from any window below the one where the improved fire escape is hung.

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

1. In a fire escape, the combination with a suspended rope, of a friction block cross-grooved on opposite sides, and channeled on the edges to intersect said cross-grooves, a spring clamping plate fast by one end on the block and adapted to vibrate in a recess of the block and press the rope in one of the cross-grooves, and a seat suspended from the block, substantially as described.

2. In a fire escape, the combination with a friction block provided with opposite grooves, one on each side, and a peripheral channel near one side of the block, the ends of said channel being connected to the ends of one of said grooves, which groove has a curved top wall, a parallel channel intersecting the other of said grooves at its lower end, and vanishing at the apex of the block, and a recess in one side of the block, of a pendent rope located in the grooves and channels of the block, a spring clamping plate in the recess, a bolt and nut adapted to clamp the plate on the rope, a handle on the block, a flexible band seat, and means to connect the seat and block, substantially as described.

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Witnesses:
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