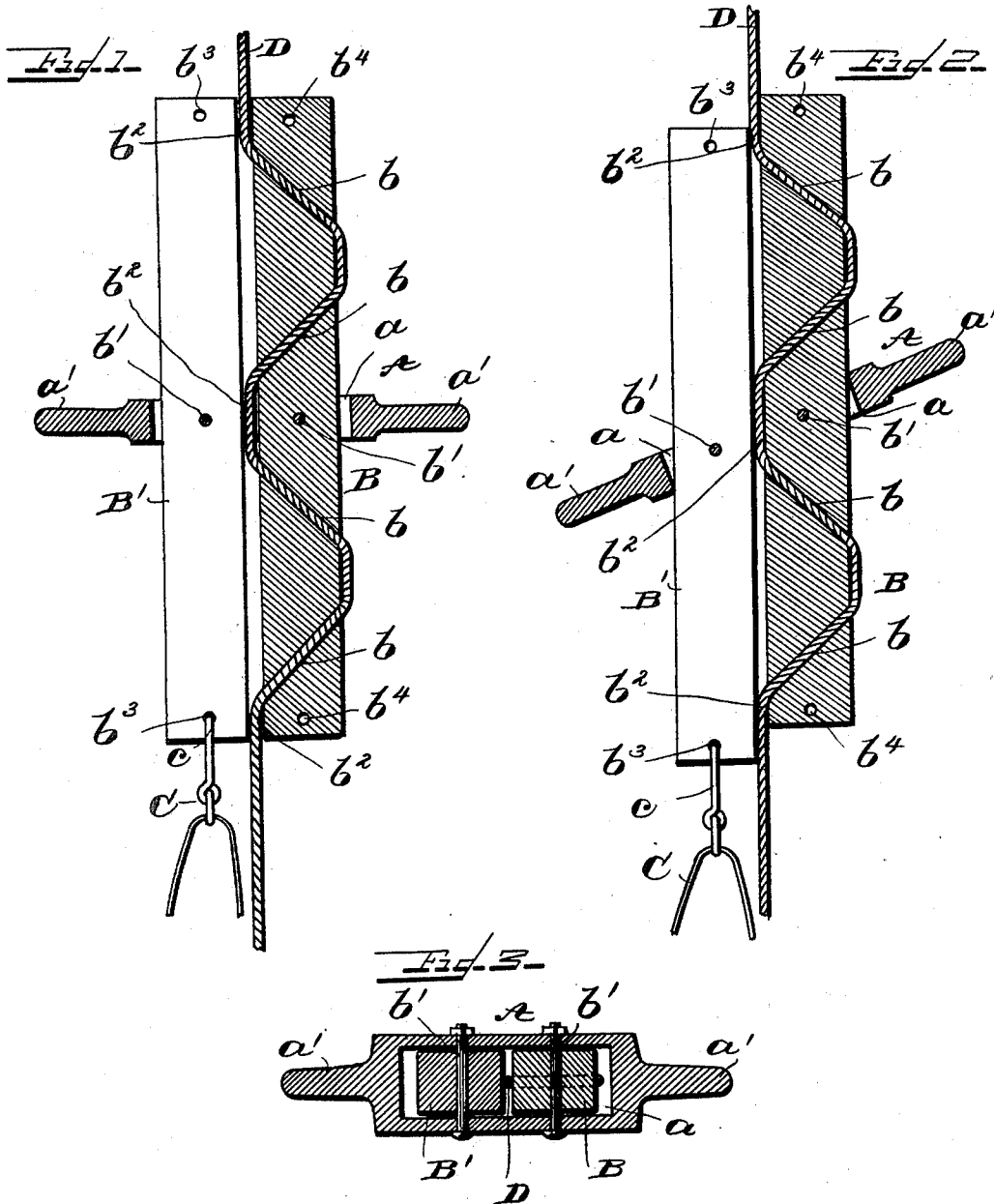


(No Model.)

J. DEMPSTER.
FIRE ESCAPE.

No. 592,582.

Patented Oct. 26, 1897.



WITNESSES—

G. A. Fauberschmidt,
J. D. Kungobury,
J. C. Schmitt

INVENTOR—

John Dempster
By Whitaker & Revock
Attys.

UNITED STATES PATENT OFFICE.

JOHN DEMPSTER, OF KNOXVILLE, TENNESSEE.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 592,582, dated October 26, 1897.

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To all whom it may concern:

Be it known that I, JOHN DEMPSTER, a citizen of the United States, residing at Knoxville, in the county of Knox and State of Tennessee, have invented certain new and useful Improvements in Fire-Escapes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention is an improvement in fire-escapes; and it consists in the novel features hereinafter described, reference being had to the accompanying drawings, which illustrate one form in which I have contemplated embodying my invention, and said invention is fully disclosed in the following description and claims.

Referring to the said drawings, Figure 1 represents a side elevation, partly in section, of my improved fire-escape, showing it in position to permit the free passage of the rope through the same. Fig. 2 is a similar view of the device, showing the position occupied by the parts when the rope is under tension. Fig. 3 is a horizontal sectional view of the device.

The device consists, essentially, of a pair of blocks pivotally mounted side by side in a frame provided with hand-grips or arms, one of said blocks being provided with passages extending through it transversely at different angles for the passage of the rope, which is thus compelled to take a tortuous course.

In the drawings I have shown the frame consisting of a yoke or link A, having a central aperture *a* and provided at each end with hand-grips *a'* *a'* for operating the same. In the aperture *a* are pivoted the friction-block B, provided with inclined rope-passages *b*, passing through said block transversely in oppositely-inclined directions, and the clamping-block B', said blocks being shown as secured in position in the yoke by pivot-bolts *b'* *b'*. The passages *b b* are disconnected on the inner side of the block B, (in this instance they are shown as disconnected on both sides,) so that portions of the rope will lie between the two blocks B B', as indicated at *b² b²*, and may be clamped between them to increase the tension on the rope, which is normally imparted to it in passing through the tortuous passages of the block B. The clamping-block

B' is provided at each end with a securing device (in this instance an aperture *b³*) adapted to receive a detachable belt, strap, or other suspending device C. In this instance I show a belt C, provided with a hook *c*, adapted to be inserted in either of the holes *b³ b³*. I also prefer to provide the block B at each end with an aperture *b⁴*, as shown, for a purpose hereinafter explained.

In using the device the rope D is secured to a stationary object after being passed through the passages of the block B, the operator passes the belt C around his body, and the hook *c* is placed in the lower aperture *b³*, after which he swings himself free. The weight of the operator will draw the clamping-block B' downward into the position shown in Fig. 2, and will thus clamp the rope D so tightly that it will either not allow the device to slip on the rope at all, or if at all at a very slow speed. The operator by taking hold of the handles *a' a'* and bringing the yoke into a substantially horizontal position can relieve the tension on the rope, so as to permit the rope to pass more freely through block B, and the speed of the descent can thus be regulated very accurately by the operator.

It will be noted that the weight of the operator tends to clamp the rope more tightly, and he exerts his strength merely to relieve the tension sufficiently to secure an easy descent. In this way the operator is not obliged to apply the tension with his hands, thus rendering the operation of the device very accurate, positive, and easily controlled.

The device can be used in either direction by changing the hook *c* from one of the holes *b³* to the other. If it is desired to lower a person by means of the rope, this can be done by securing the belt to a stationary support and fastening one end of the rope around the person to be lowered. In this case the downward pull upon the rope will draw the block B down and clamp the rope tightly between the two blocks, and the tension can be relieved by the lowering party by operating the yoke A to separate the two blocks.

If the operator prefers to apply the tension directly, it may be done either in lowering himself or another person by changing the belt from one of the holes *b³* to the corresponding hole *b⁴* in the block B, when the op-

erator will by means of the yoke A draw the block B' into clamping contact with the rope D. I prefer, however, that the device should be used with the belt attached to the block B' for the reasons stated.

If the person to be lowered be insensible from any cause, such person may be safely lowered by changing the belt from one of the holes b^3 in block B' to the corresponding hole b^4 in block B. Thus the weight of the person to be lowered will be suspended on the opposite side of the rope D, and will consequently not cause a clamping of the friction-block upon the rope, and the rate of descent can in this case be governed by a person or persons on the ground below pulling on the rope D and making it taut, and thus preventing the too rapid sliding thereof through the tortuous passages b in the block B, this means, however, to be used only in the case of persons who have been overcome by heat or smoke and who are themselves incapable of operating the locking device, as before described.

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

1. A fire-escape comprising among its mem-

bers, a yoke, a pair of blocks pivoted centrally side by side in said yoke, which forms the only connection between them, one only of said blocks being provided with rope-passages terminating at separated points on the inner side of said block and a supporting device secured to the other block, substantially as described.

2. A fire-escape comprising among its members a yoke having a handle at each end, a pair of blocks pivoted centrally side by side in said yoke, one only of said blocks being provided with rope-passages terminating at separated points on the inner side of said block, a detachable supporting device secured normally to the other block, both of said blocks being provided at each end with means for engaging the said supporting device, substantially as described.

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

JOHN DEMPSTER.

Witnesses:

CHAS. H. BROWN,
JAS. H. WELCKER.