(No Model.)

J. REIDY.

FIRE ESCAPE.

No. 288,117. Patented Nov. 6, 1883.

Fig 1

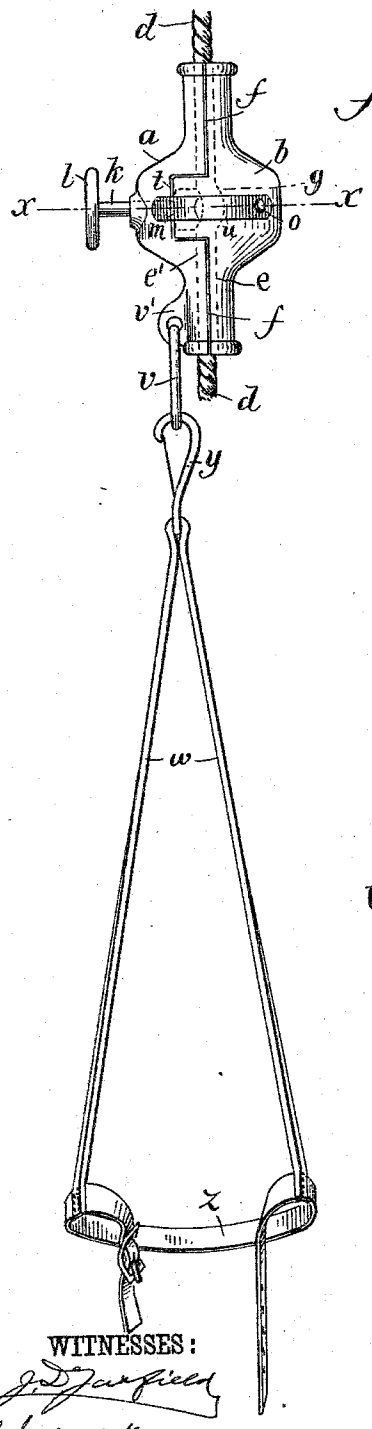


Fig 2

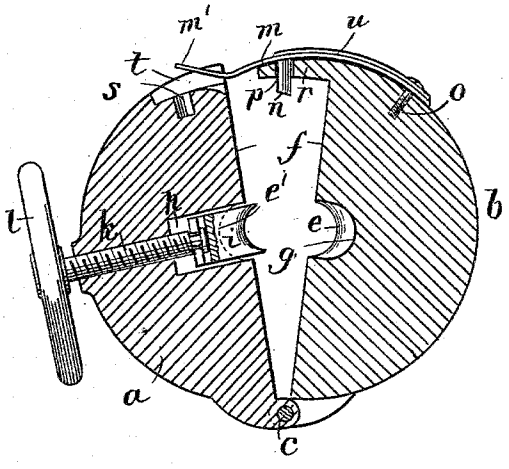
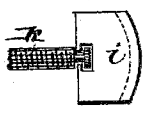


Fig 3.



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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 288,117, dated November 6, 1883.

Application filed June 4, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES REIDY, of Pittsfield, in the county of Berkshire and State of Massachusetts, have invented a new and Improved Fire-Escape and Sling-Block, of which the following is a full, clear, and exact description.

The object of my invention is to provide a simple, strong, and easily-operated device or machine to act by its friction on a hanging rope or chain, to facilitate the escape of persons and the recovery of goods from burning buildings, and a device alike useful for the suspension of riggers or others in elevated positions while at work on the exterior faces of buildings, or in other situations.

The invention consists in a couple of blocks hinged together to hold the rope between them in grooves of the blocks, one of which blocks is fitted with a movable grip-plate or brake-shoe adapted to be forced against the suspension-rope by the power of a screw threaded into one of the hinged blocks, for forcing the rope against the face or into a depression of the groove of the opposite block for regulating the speed of slip or descent of the device on the rope, or holding it in any desired position thereon, the hinged blocks being fitted with a simple spring-pin lock or latch for locking the blocks together and against the pressure of the brake-screw, all as hereinafter fully described and claimed.

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

Figure 1 represents my improvement in side elevation. Fig. 2 is an enlarged horizontal sectional elevation thereof on the line *x x*, Fig. 1; and Fig. 3 is a side view of the brake shoe or block.

a and *b* represent a couple of metal or wood blocks, of suitable shape, size, and strength, and which are hinged together strongly at *c*, in any approved way, to open to receive the suspension-rope *d*, and to be closed about the rope to hold it in grooves *e e'*, cut or formed, respectively, in the meeting faces *f* of the blocks *a b* and ranging lengthwise thereof, as shown.

At about the center of the length of groove *e*, I form a depression, *g*, in block *b*, and opposite this depression and in a recess, *h*, of block *a*, I fit, loosely, the movable grip-block or brake-shoe *i*, which has any suitable swivel-connection with the inner end of a screw, *k*, which is threaded into the body of block *a*, and has any approved lever or hand-wheel device, *l*, by which to turn the screw for forcing shoe *i* against rope *d*, with the varying pressure required to regulate the descent of the blocks *a b* and connected load, or to bring the blocks to a stop at any point desired, the outer contact-face of shoe *i* being concaved transversely, as in Fig. 2, for effective grip on the rope *d*, and convexed longitudinally, as in Fig. 3, to correspond with the concavity of the opposite depression, *g*, as in dotted lines, Fig. 1, so as to force the rope *d* into said depression more or less, to better control the travel of the blocks *a b* on the rope *d* by the increased friction afforded by the bend of the rope, and to more effectively lock the blocks *a b* fast on the rope than could be done with the groove *e* formed straight through the block *b* and shoe *i* concaved only on its edge.

For a simple and self-acting latch device for locking blocks *a b* together about rope *d* and against the pressure of the screw *k*, I provide the plate *m* with a pin, *n*, and fix the plate *m* firmly at one end to either block *a b*—in this instance to block *b*—by a pin or screw, *o*. The plate *m* may have sufficient elasticity of itself to force pin *n* down through its aperture *p* in the lip *r* and into the registering-recess *s* of the lip-socket *t* in the opposite block, *a;* but to make the self-locking action more speedy and certain, I prefer to secure the plate-spring *u* over the pin-plate *m*, and by the same fastening screw or pin *o*, the free end of the pin-plate being bent upward slightly at *m'*, to avoid catching in or on the lip-socket *t*, as the hinged blocks are closed and locked by simply swinging them together, said end *m'* serving, also, as a means of lifting the pin *n* for unlocking the blocks *a b*.

It will be noted that the lock-pin recess *s* inclines toward the meeting face *f* of the block in which it is cut as said recess *s* deepens and receives the pin *r* at an angle with the joint faces *f* of the closed blocks *a b*, to more effectively lock them together against separation by any strain of use.

As a convenient means of suspending a person from the blocks *a b*, I employ a link or ring, *v*, passed through an aperture of an ear or lug, *v'*, on one of the blocks, and connect the hang-straps *w* to the link by a snap-hook, *y*, or analogous device, any suitable body strap or belt, *z*, being connected to straps *w*, and to be buckled or laced about the body of the user.

In operation, the blocks *a b* are clasped and locked upon the rope *d*, and the strap *w* passed over the head of the person and the belt *z* secured under the arms, whereupon the belts are connected to the blocks by engaging hook *y* with link *v*. Sufficient pressure of shoe *i* on rope *d* is now secured by operating the screw *k*, to control the descent of a person or persons—with or without valuable goods—said screw *k* being in convenient reach to readily be operated by the hands as to its pressure, and the feet of the user being entirely free for safe guidance of the body past any projections of the building. In like manner the blocks may be shifted and then locked fast on the rope *d* by the screw to hold workmen at varying heights while painting or repairing buildings, or in mines, or while making general repairs, my improvement by its simple construction and action being capable of correct and quick adjustment in emergencies, and being convenient and safe to use.

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

1. The combination of the blocks *a b*, hinged and latched together, and fitted with opposite rope-grooves, *e e'*, block *a* being fitted with the screw *k*, which is swiveled to the shoe *i*, for forcing the suspension-rope *d* into the opposite depression, *g*, of block *b*, substantially as shown and described.

2. The blocks *a b*, hinged together, and formed with opposite rope-grooves, *e e'*, one block having the central depression, *g*, and the other block socketed to receive the shoe *i*, which is concaved transversely and convexed longitudinally on its rope-gripping face, substantially as shown and described.

3. The combination, with the blocks *a b*, hinged together, of the apertured overhanging lip *r*, and the spring-pin *n* of one block, and the lip and pin sockets *t s* of the opposite block, substantially as shown and described.

4. The combination, with the lip *r* and its lock-pin *n*, of the lip-socket *t* and pin-recess *s*, said recess *s* inclining as it deepens toward the meeting faces of the blocks *a b*, substantially as shown and described.

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Witnesses:
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