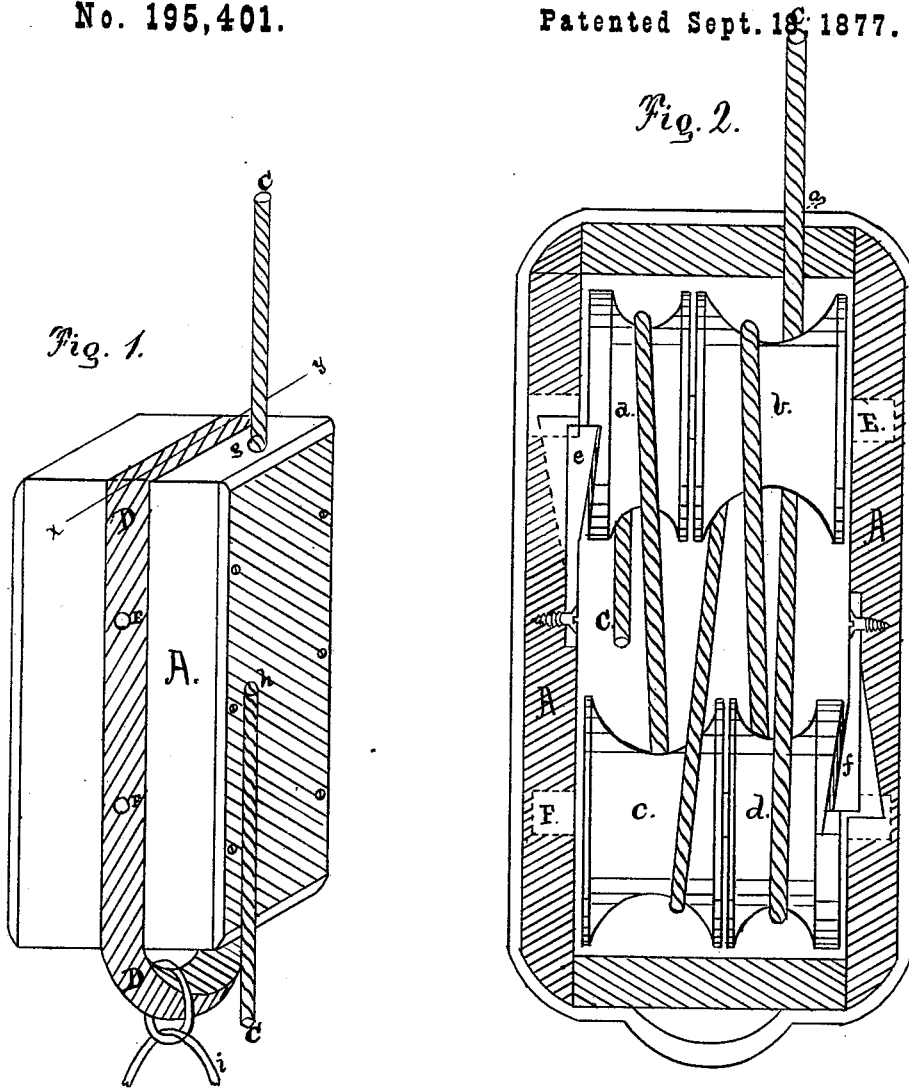


J. RIESDORPH.

FIRE-ESCAPES.

No. 195,401.

Patented Sept. 18, 1877.



Attest:
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UNITED STATES PATENT OFFICE.

JOHN RIESDORPH, OF BURLINGTON, VERMONT.

IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. **195,401**, dated September 18, 1877; application filed June 16, 1877.

To all whom it may concern:

Be it known that I, JOHN RIESDORPH, of the city of Burlington, in the county of Chittenden and State of Vermont, have invented certain new and useful Improvements in Pulley-Blocks for Fire-Escapes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention consists of a pulley-block of peculiar construction, and which is designed particularly for a fire-escape. The friction sheaves or pulleys within the block, and the rope which is reeved over them, are so arranged that the persons using the same can regulate, with the slightest effort, the velocity of their descending motion.

Similar letters indicate corresponding parts.

Figure 1 is a perspective view of the pulley-block A, in position for use. Fig. 2 is a vertical section of the block A through the line *xy*, showing the interior construction of the same, the relative position and working of the upper and lower sets of friction sheaves or pulleys *a b c d*, with the arrangement of the rope C and the upper and lower springs *ef*, by means of which two of the sheaves, *a* and *d*, are securely held from being drawn back.

A is the pulley-block, made of wood or other suitable material. It is rectangular in form, with its corners rounded, and of any desired dimensions, and is intended to completely inclose its interior, two apertures, *g*, in the upper end or top, and *h*, near the center of the front side, only, being required for the passage of the rope C.

Around the long circumference of the block A a leather or metallic strap, D, is fastened, to the lower extremity of which a belt, *i*, or other device for securing the person or weight to be lowered, is connected.

The sister sheaves or pulleys *a b* and *c d* are inserted into the slot or mortise of the

block A, and are arranged in pairs, one set above the other. Each of the sheaves or pulleys revolves independently on metal pins or axles E F, which pass transversely through the cheeks of the block A, and terminate in the outer surface of the same. They are made of wood or metal, and their peripheries are grooved in the ordinary manner, to hold in position the rope which is reeved over them.

The rope C is reeved upon the sheaves or pulleys by inserting one end into the block A, through the aperture *g* in its upper end. Thence it passes down behind the sheave *b*, and up over and around the sheave *d*; thence up over the sheave *b*, and then down over the sheave *c*; thence up over and around the sheave *a*; thence down and out through the aperture *h*, from whence it falls.

Springs *ef* are placed in the interior of the cheek of the block A, opposite the front edges of the lower right-hand and upper left-hand sheaves *d* and *a*, they being the sheaves over which the upper and lower ropes are first reeved. The sides of the sheaves or pulleys against which these springs *e* and *f* press, have a cam-shaped surface, notched in such a way that they are each prevented from revolving while the block A is moving down the rope, thereby increasing the friction sufficient to counterbalance the weight to be lowered, and enabling the person holding the lower end of the rope to more easily control the downward movement of the block.

When the block A is pulled back, all the sheaves or pulleys revolve readily on their axes.

To arrange the block A for use, attach the upper end of the rope C firmly to any portion of the room from which the descent is to be made, and allow the remainder of the rope to fall, on the outside of the building, to the ground; run the block A up to a point on the rope where one can conveniently attach his person to it by means of the belt *i*; then, grasping the rope C with the hand a short distance below the block A, allow it to run through the block at the aperture *h* as rap-

idly as is desired. The descent is, at any moment, controlled by a slight pull upon the rope C.

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

The pulley-block A, in combination with the sheaves *a b c d*, the springs *e f*, and the rope C, arranged substantially as and for the purposes described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN RIESDORPH.

Witnesses:

CHARLES E. ALLEN,
C. A. HUNTINGTON.