(No Model.)

G. PRITCHETT.

FRICTION BLOCK FIRE ESCAPE.

No. 366,736. Patented July 19, 1887.

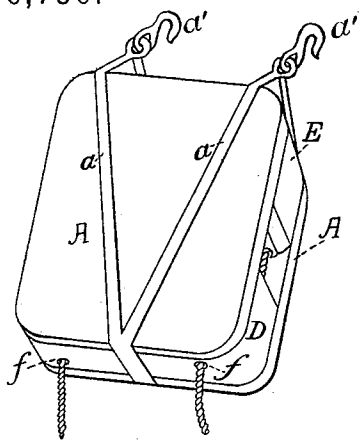

Fig. 1

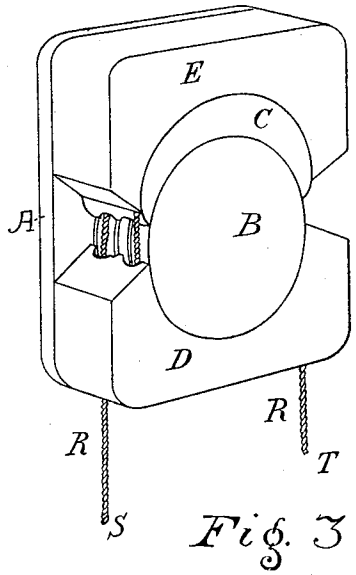

Fig. 3

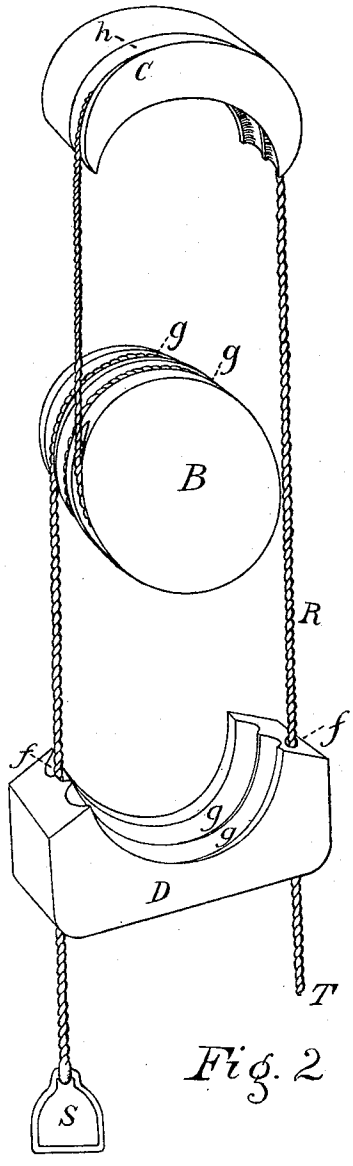

Fig. 2

Witnesses.
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FRICTION-BLOCK FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 366,736, dated July 19, 1887.

Application filed May 5, 1887. Serial No. 237,201. (No model.)

To all whom it may concern:

Be it known that I, GEORGE PRITCHETT, a citizen of the United States, residing at Binghamton, in the county of Broome and State of New York, have invented certain new and useful Improvements in Friction-Block 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Similar letters refer to similar parts throughout the several views.

My invention is that of a friction-block designed mainly for use as a fire-escape; but it may also be used for lowering heavy articles when it is desired to retard the momentum, or for any purpose to which a friction-block is applicable.

In the accompanying drawings, Figure 1 is a view in outline of the completed block. Fig. 2 is a view of the working portions of the block removed from each other to show more clearly the detail of construction and method of use. Fig. 3 is an elevation of the block with one side removed to show the relative location of the several parts in the block.

The sides or frame of the block A A are plain solid pieces of plank bolted firmly through the blocks, and having the iron straps *a a* on them, with links and hooks *a' a'*, by which to hang it. Between the sides, near the middle, is the cylindrical block B, bolted fast to the sides A A. This block is cut with a spiral groove, *g*, running round and round it—cut deep enough to carry a rope of the size required for the use to which it is to be put. In use for a fire-escape I have found a half-inch rope a convenient size. The spiral groove may be cut as many times around the block as required to produce the necessary friction. For ordinary use twice around is sufficient; but more may be added, and used or not, as heavier or lighter weights are to be lowered.

Above the cylindrical block B is a cap-block, C, with the under side concaved to fit the cylindrical block and grooved to correspond with the grooves in B and set close down on it, as shown in Fig. 3. This forms closed recesses for the rope and prevents it being drawn out of place. Over the top of C there is a groove, *h*, in which the rope runs after it leaves the spiral groove of the cylindrical block, creating more friction-surface and carrying the rope clear from the round block, for it will be noticed that the cap-block is the segment of a circle of larger diameter than the block B. Above this is the head-block E, Fig. 3, with its under side concaved and grooved to fit over and correspond with the upper surface of C.

Below the cylindrical block B is the foot-block D, with its upper surface fitted to correspond with the under surface of B, and having the holes *f f*, through which the rope runs when it enters and leaves the block. When it is to be used for a fire-escape, the rope R has at one end, S, the stirrup, as shown in the drawings, Fig. 2, or may have attached a sack, chair, or any device for supporting the person. The block being hung by the hooks *a' a'*, the weight to be lowered is attached to the rope at S, and as the rope is paid out by the person holding it at T the weight will slowly descend, the friction of the rope in the spiral groove greatly retarding its motion. I have found in practice that the descent of ten pounds at S may be checked or entirely stopped by one pound of strength at T. So in use an adult person, with his weight on the rope and holding the rope at T in his own hands and paying it out, will have no difficulty in regulating his descent, and this without any risk of burning his hands on the rope. The form in which the block is hung and the rope run through the foot-block prevents the block from being thrown out of place or jerking, and permits a steady, uniform descent. If the persons dare not risk letting themselves down, the rope T may be thrown to the ground and held and paid out by another, and immediately run back when its weight is discharged. It is used in the same way for lowering dead weights, the weight being attached at S and the rope paid out by the operator as the weight descends. The advantage which it possesses seems to be in the peculiar pressure secured upon the rope by its turning in the spiral grooves in the cylindrical block, by which much more friction results than in any

form of friction-block known to me. The recesses for the rope, being cased in so that they are substantially circular holes, prevent any possibility of the rope throwing out or catching, and secures a steady strain.

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

A friction-block constructed with flat sides, having hangers attached, in combination with a cylindrical block having a spiral groove cut around it, with concave blocks above and below it grooved to correspond with the grooves on it, the upper block having a groove on its upper surface and the lower one having holes through which the rope runs when it enters and leaves the block, all substantially as shown and described.

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

GEORGE PRITCHETT.

Witnesses:

A. L. PINE,

JOHN LA GRANGE.