

No. 639,364.

Patented Dec. 19, 1899.

M. H. DOOLY.
FIRE ESCAPE.

(Application filed Aug. 28, 1899.)

(No Model.)

Fig. 1.

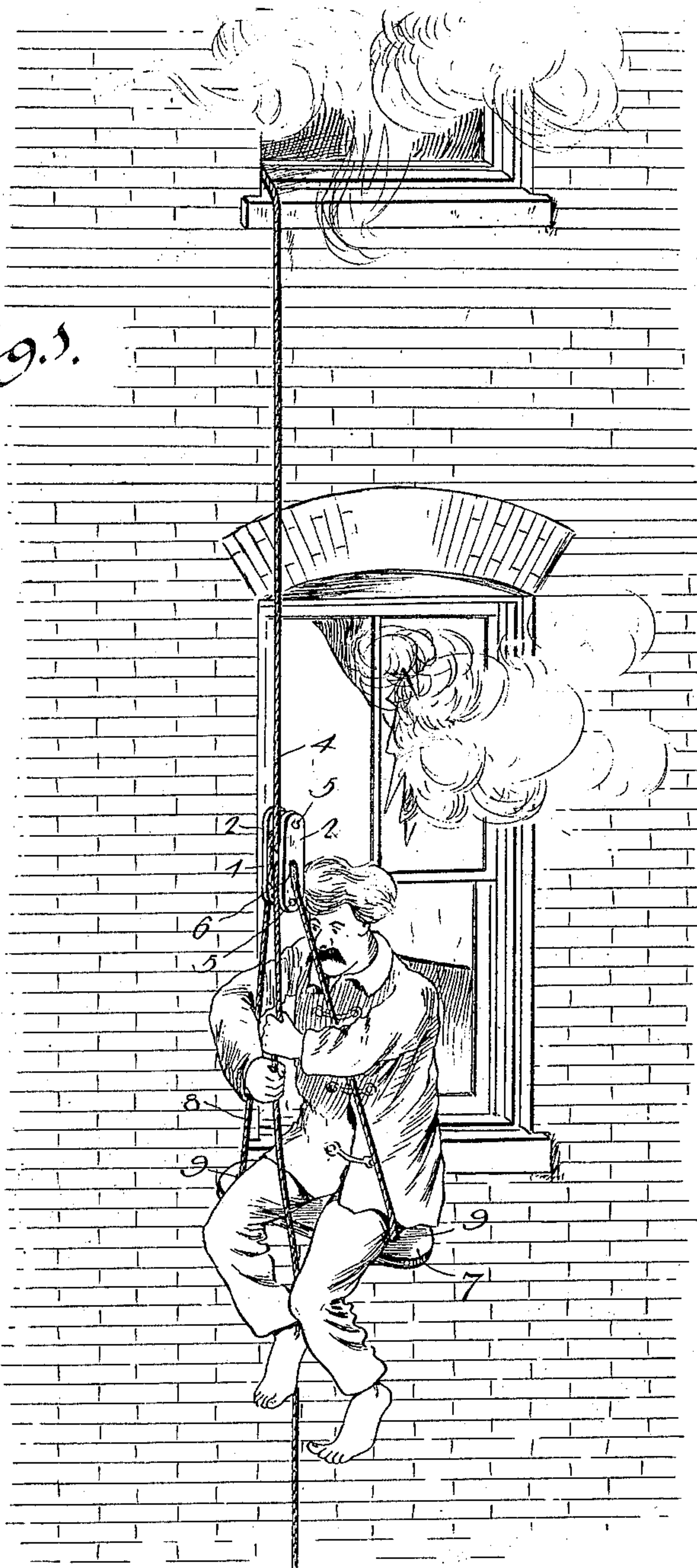
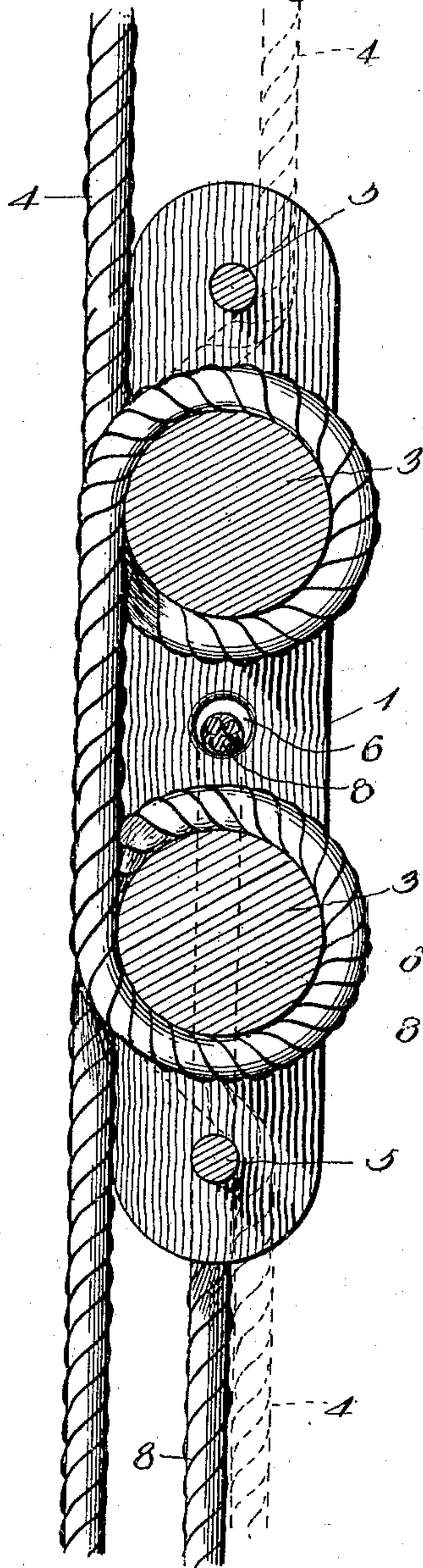


Fig. 2.



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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 639,364, dated December 19, 1899.

Application filed August 28, 1899. Serial No. 728,734. (No model.)

To all whom it may concern:

Be it known that I, MARTIN H. DOOLY, a citizen of the United States, residing at North Adams, in the county of Berkshire and State of Massachusetts, have invented a new and useful Fire-Escape, of which the following is a specification.

My invention relates to fire-escapes, and has for its object to provide a device which will be cheap, simple, and efficient; and it consists in the combination and improved construction of parts of the same, as will be hereinafter more particularly set forth.

In the accompanying drawings, in which the same reference-numeral indicates a corresponding part in each of the views in which it occurs, Figure 1 is a perspective view of my apparatus in position for use, and Fig. 2 is a longitudinal sectional view.

Referring more particularly to the drawings, 1 indicates the main frame or body of my fire-escape, the sides 2 2 of which are held parallel with each other and at the desired distance apart by means of the friction-blocks 3 3. These blocks are substantially cylindrical and are rendered stationary by being formed integral with or rigidly secured to the side pieces at such distance from the ends thereof as to form guides to prevent the rope 4 from running off the ends of the blocks.

The rope 4, upon which the frame 1 travels, is secured at its upper end in the room of the building provided with the escape and is of such a length as to reach to the ground. The intermediate portion of the rope is passed one or more times around the blocks 3 3 and under the guide-pins 5 5—one at each end—although the device may be used without passing the rope under the pins. The transverse pins 5, which increase the friction of the device, are of much less diameter than the blocks 3 and are located in line with the centers of the latter, so that there is no liability of the rope engaging them when the parts are arranged as shown in full lines of Fig. 2 of the drawings. As shown in the drawings, a portion of the rope is passed once around each block, with a portion lying parallel with the sides and each end extended from its respective block and beyond the ends of the frame.

Suspended from a perforation 6 through the sides is a seat 7. The rope 8, by means of

which the seat is supported, is of sufficient strength to bear the weight of the occupant of the seat and is preferably passed loosely through the perforations 6 and through perforations 9 in the ends of the seat.

By locating the perforation substantially midway of the length of the side pieces the device is reversible—that is, it can be used with either end of the frame up. If desired, the perforation may be made through the side pieces and through one of the blocks, in which case the block would have to be used with that end down.

As above described, it is evident that the device can be made very light and yet have sufficient strength to support the heaviest person, as the rigid connection between the sides and the blocks will prevent the parts from warping or getting out of order. It will also render the frame sufficiently rigid to prevent its being drawn out of shape by the coils of rope around the blocks.

The stationary blocks will increase the friction of the rope to such an extent that the operator, sitting in the seat and holding the portion of the rope in front of him, can easily control the frictional contact of the rope with the blocks and thereby the descent of the seat. The friction is increased by passing the ends of the rope under the guide-pins, and the rope is retained in position on the block or frame without danger of its becoming entangled and rendered useless from careless handling.

In using my escape all that is necessary is to throw the frame and lower portion of the rope out of the window and get into the seat after having secured a good hold on the rope below the frame. By increasing or decreasing the tension upon the rope the descent is made as fast or slow as desired. The operator can sit or hang from the seat in such position as to hold the rope and regulate the descent. By making the hole through the sides of the frame the weight of the operator is thrown in a direct line with the guide-pins at the ends of the frame and also with the supporting-rope, thereby preventing any liability of the parts being thrown out of alignment or into binding or inoperative positions by the weight or movement of the operator.

It is proposed that one of the escapes be

secured by a hook or pin through the upper end of the rope in each room exposed to fire, as they can be made so cheaply that the item of expense will be but nominal. Although I
5 prefer to make the frame of wood, it can be made of light metal as well.

Having thus described my invention, I claim—

10 In a fire-escape, the combination of the side pieces, the rigid friction-blocks arranged between the side pieces, the guide-pins arranged at the ends of the side pieces and located above and below the friction-blocks, a
15 seat or support connected with the side pieces, and a main rope arranged on the friction-

blocks and adapted to be passed between the same and the guide-pins or to extend directly from the blocks, said guide-pins being of much less diameter than the blocks, whereby they are located beyond the rope when the
20 latter is not passed around them, substantially as and for the purpose described.

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

MARTIN H. DOOLY.

Witnesses:

H. A. GALLUP,
A. G. BALLOU.