

(No Model.)

H. C. MOIR.
FIRE ESCAPE.

No. 444,670.

Patented Jan. 13, 1891.

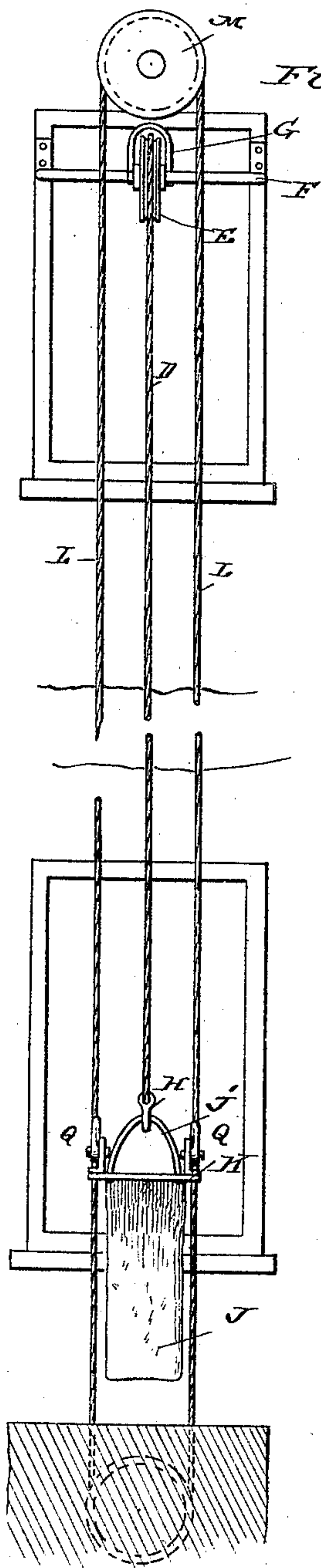


Fig. 1.

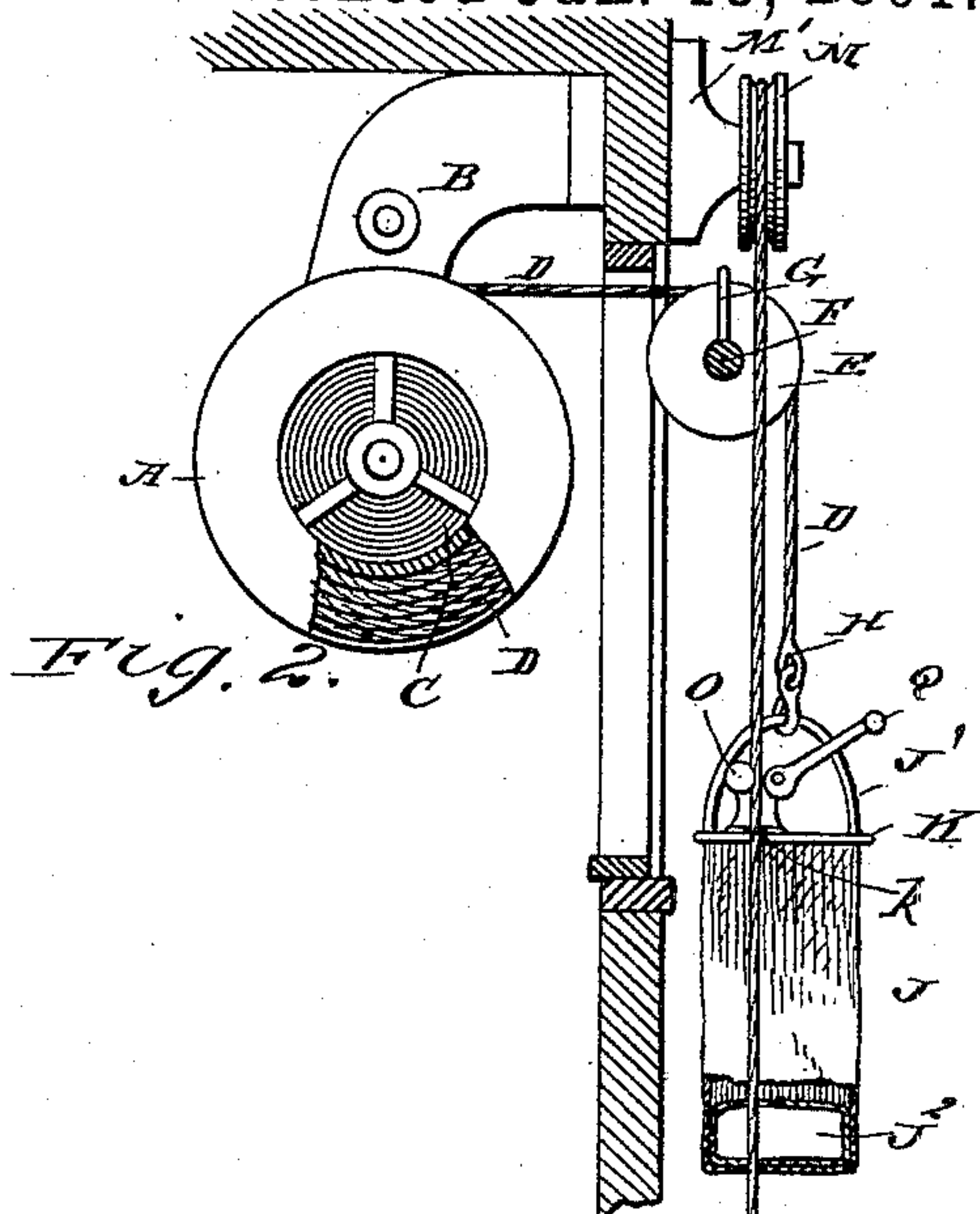


Fig. 2.

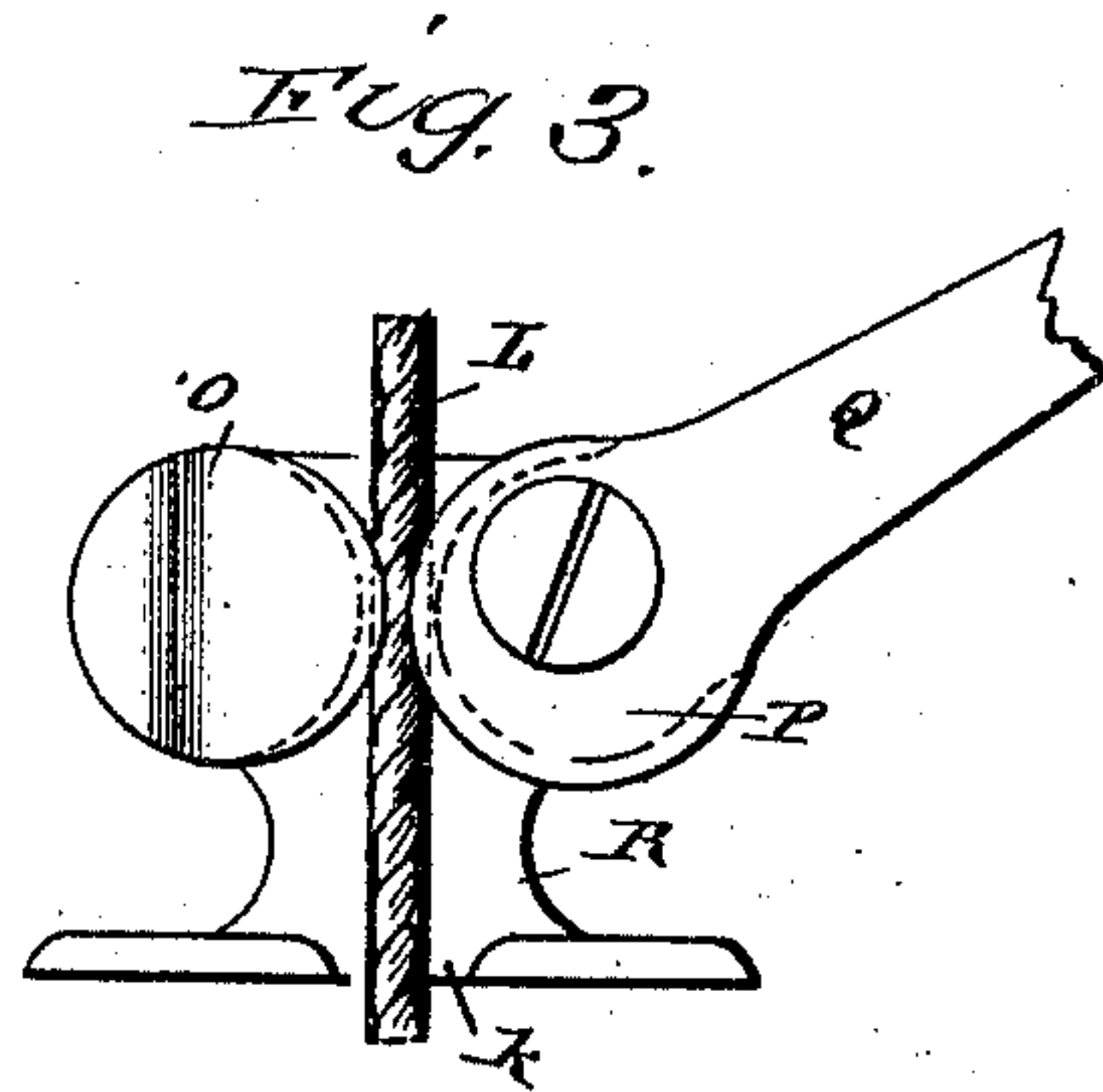


Fig. 3.

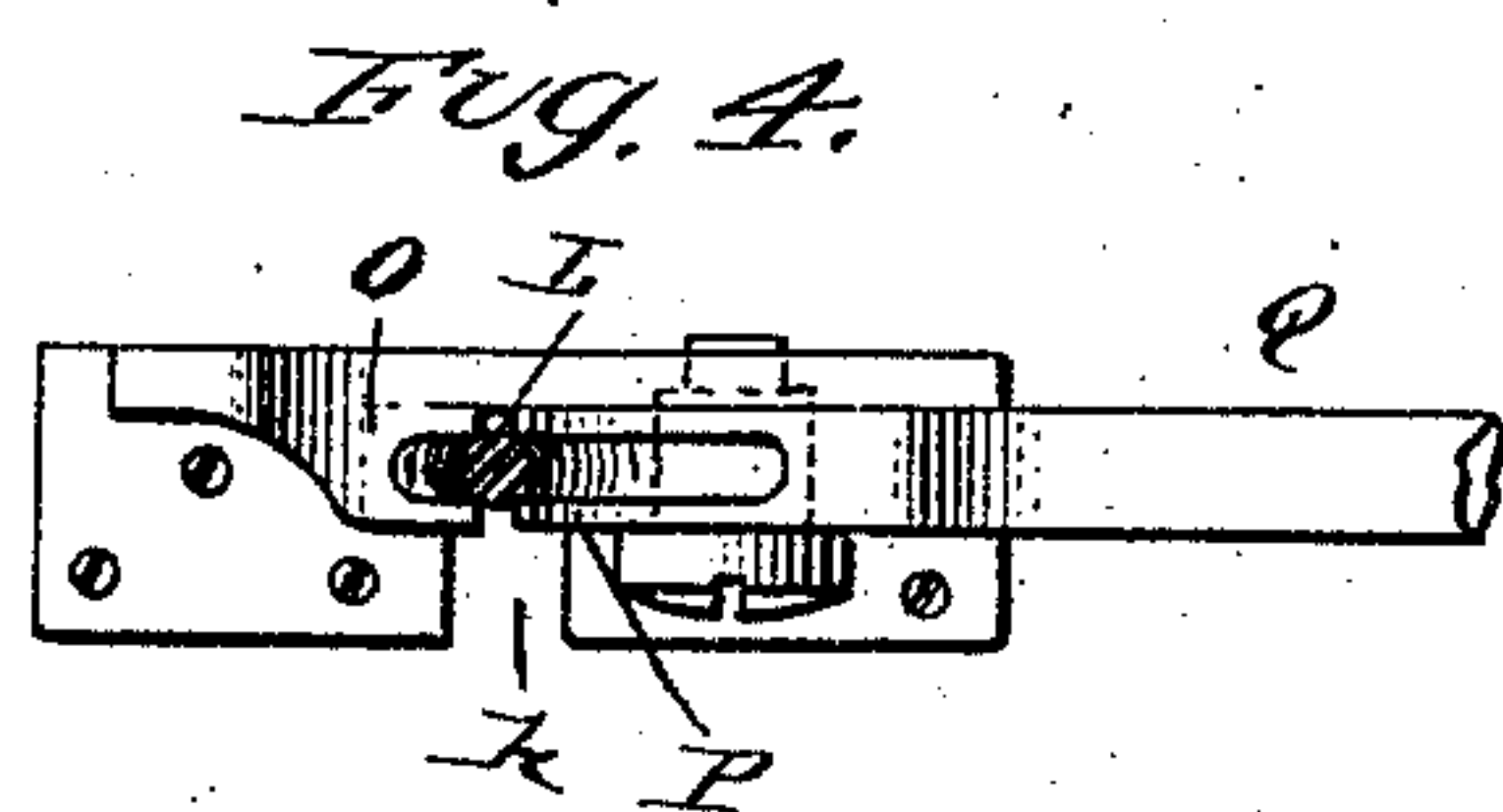


Fig. 4.

WITNESSES:

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HENRY C. MOIR, OF SYDNEY, NEW SOUTH WALES.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 444,670, dated January 13, 1891.

Application filed November 6, 1890. Serial No. 370,463. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. MOIR, of Sydney, New South Wales, Australia, have invented a new and Improved Fire-Escape, of which the following is a full, clear, and exact description.

The invention relates to an improvement in fire-escapes; and it consists of the peculiar construction and arrangement of parts, as hereinafter more fully described, and pointed out in the claims.

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

Figure 1 is a front elevation of the improved fire-escape, showing the same applied to a building. Fig. 2 is a partly sectional side elevation. Fig. 3 is an enlarged detail elevation of the clamp for holding a bag or basket on the rope, and Fig. 4 is a plan view of the same.

A flanged drum A is journaled in hangers B or other suitable support directly behind a window, and the said drum contains a very powerful spiral spring C, which has one end attached to the drum and the other attached to the shaft on which the drum is journaled. A wire rope or a chain is wound on the drum between the flanges and passes from the said drum over a grooved pulley E, journaled on a shaft F, the shaft extending transversely across the upper part of the window on the outside. Over the pulley E a guard G extends to prevent the rope D from slipping off of the pulley. To the free end of the rope or chain D a snap-hook H is attached, in which the bail J' of a bag or basket J is passed, which bag or basket has a top frame K, provided with opposite recesses k for the passage of an endless rope L. The endless rope extends over a pulley M, which is pivoted to a projecting bracket M' on the wall of the building above the uppermost window and over a pulley N, journaled in a suitable box below the sidewalk. The rope L at each side passes between a fixed jaw O and the cam-head P of a lever Q, respectively, held and pivoted on an upwardly-projecting lug R on each side of the frame K.

The operation is as follows: Ordinarily the rope or chain D is wound on the drum A, the spring C being uncoiled while the bag or

basket J is contained in the room. In case the fire-escape is to be used the bag or basket J is suspended from the hook H and the levers Q are raised so that the rope L can pass in between the fixed jaws O and the cams P. The person wishing to descend then enters the bag or basket J and the weight of the person causes the said basket to descend, whereby the rope D will be uncoiled from the drum A and the spring C will be coiled or brought in tension, and thus the spring acts to sufficiently retard the descent of the bag. The friction of the rope L on the cams P tends to jam the said cams against the rope and thus lock the bag against movement. For that purpose the handles or levers Q must be held raised as long as the bag is to descend. In case the bag descends too rapidly it can be locked to the rope L at one side by a proper movement of the lever Q, leaving the opposite side of the bag unconnected with the said rope. The friction of the rope L on the pulleys M and N will thus decrease the rapidity of the descent of the bag. If the bag is to be checked or stopped entirely in its movements for the purpose of allowing other persons to enter the same or for other reasons, both sides of the frame K are clamped to the rope L by releasing or depressing both the levers Q. The movement of the bag J can thus be controlled very easily and accurately by persons occupying the same. The rope L serves as a guide for the bag during its movements. As soon as a load has been removed from the bag and the same is released by raising the levers Q, the spring C will uncoil and will draw the bag upward automatically. If desired, cords or chains can be attached to the ends of the levers, so that the same can be operated by a person in the room from which the bag has been lowered or by a person on the ground.

The bag is to be made of asbestos or other material which is made fire-proof, and should be so made that its sides will collapse when brought in contact with the ground. To the bottom of the bag a rope is attached, so as to enable a person from any window in the building or on the ground to pull down the bag after the same has been drawn upward by the spring. This may be necessary if women or children who cannot manipulate the levers Q are to be lowered.

At the bottom of the bag J and inside of same is placed an air-cushion J², of suitable form to prevent concussion of the brain or spinal cord, which might be produced by a descending person coming in violent contact with the ground.

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

10 1. In a fire-escape, the combination, with an endless guide-rope adapted to run over pulleys M N on the outside of a building, of a basket having recesses in its frame to receive the said guide-rope and connected to one end
15 of a rope whose other end is attached to a spring-drum on the inside of a building, substantially as herein shown and described.

20 2. In a fire-escape, the combination, with an endless guide-rope adapted to run over pulleys M N, of a basket having recesses in its frame to receive the guide-rope and provided with a clamping device, and a rope attached to the basket and to a spring-drum and passing over a guide-pulley, substantially as shown
25 and described.

30 3. In a fire-escape, the combination, with the pulleys M N, journaled on the outside of a building at the top of the same and below the sidewalk, respectively, and the endless rope L, passing over the said pulleys, of the bag J, the rope D, the pulley E, journaled on a cross-

shaft F outside of the window, and the drum A, journaled in the room and containing a spiral spring C, substantially as herein shown and described, and for the purposes set forth. 35

4. In a fire-escape, the combination, with the pulleys M and N, journaled on the outside of the building at the top of the same and below the sidewalk, respectively, and the endless rope L, passing over the said pulleys, of the bag J, the rope D, the pulley E, journaled on a cross-shaft F outside of the window, the drum A, journaled in the room and containing a spiral spring C, and devices for locking the bag at one or both sides on the rope L, substantially as herein shown and described, and
45 for the purposes set forth.

5. In a fire-escape, the combination, with the pulleys M and N, journaled on the outside of a building at the top of the same and below the sidewalk, respectively, and the rope L, passing over the said pulleys, of the bag J, the rope D, the pulley E, the drum A within the room, and the fixed jaw O and cam-lever P Q on the frame of the bag, substantially as
55 herein shown and described, and for the purposes set forth.

HENRY C. MOIR.

Witnesses:

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A. E. MANNING.