No. 631,382. Patented Aug. 22, 1899.

W. REES.

FIRE ESCAPE.

(Application filed Apr. 13, 1899.)

(No Model.)

Fig. 1.

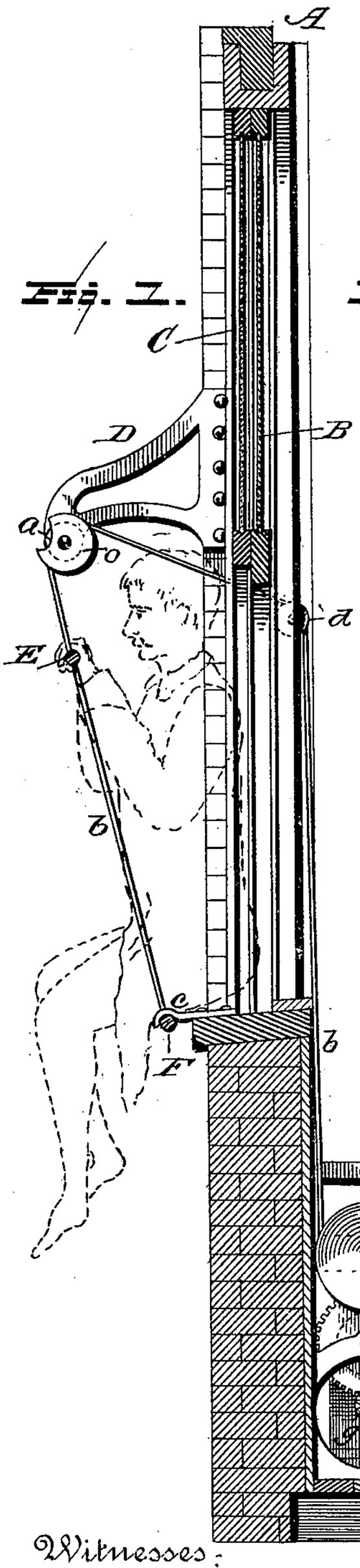
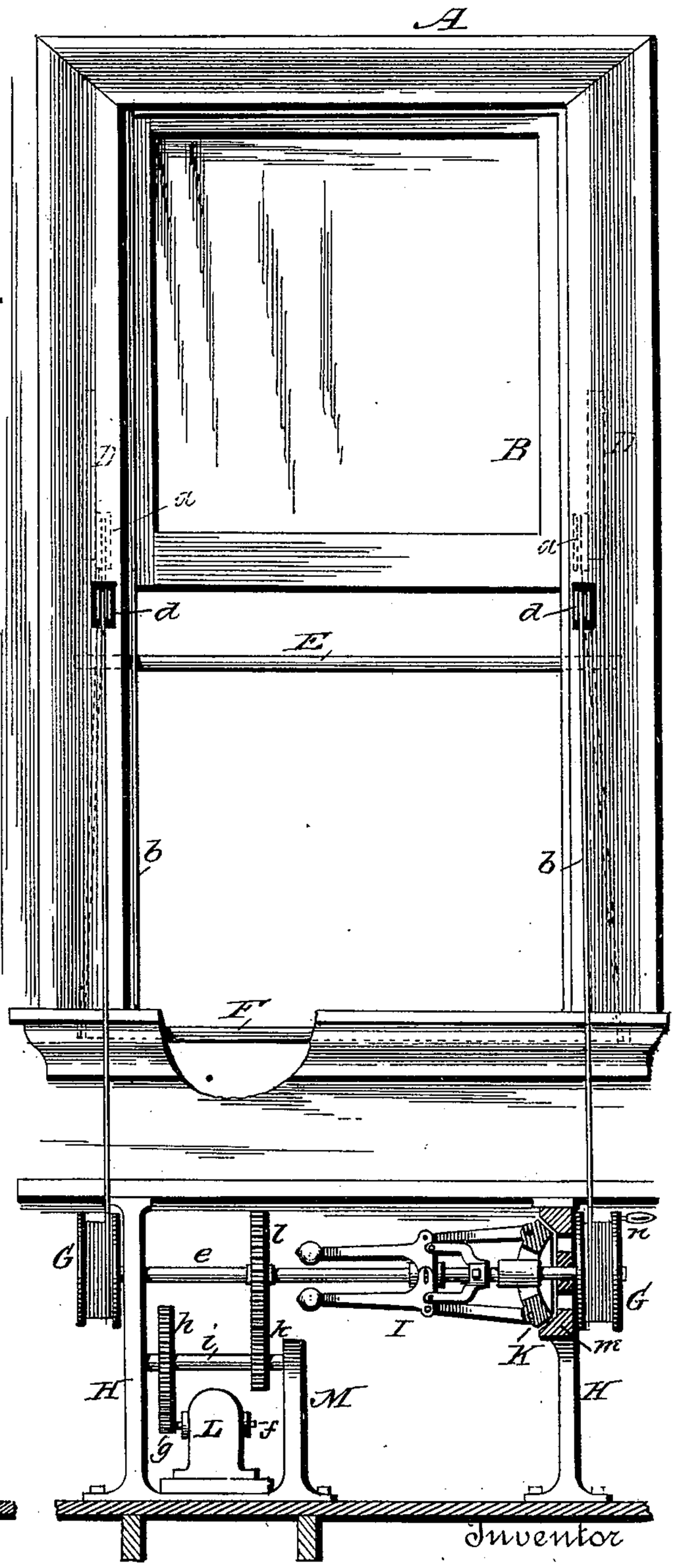


Fig. 2.



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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 631,382, dated August 22, 1899.

Application filed April 13, 1899. Serial No. 712,849. (No model.)

To all whom it may concern:

Be it known that I, WESLEY REES, a citizen of the United States, residing at Memphis, in the county of Scotland and State of Missouri, have invented certain new and useful Improvements in Fire-Escapes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

The present invention has relation to that class of fire-escapes permanently connected to a window or other part of a building and operated by ropes, cables, or steel tapes, with means for supporting the persons in their descent.

The object of the invention is to provide such a fire-escape that will be simple in its construction, quickly and effectually operated in case of fire without the loss of valuable time, and that will be at all times ready for use in descending safely from the burning building or for rescuers to ascend from the ground to any window, as circumstances may require.

The invention consists in a fire-escape constructed substantially as shown in the drawings and hereinafter described and claimed.

Figure 1 of the drawings represents a sectional elevation of a window with my improved fire-escape applied thereto, showing the figure of a person about to escape therefrom. Fig. 2 is an inner side elevation thereof, looking from the interior of a room.

In the accompanying drawings, A represents a window casing or frame of the usual construction, and B C the sashes thereof, which are shown to simply illustrate the application of my invention. Upon the outer side of the building and at each side of the window are located suitable brackets D, secured in place in any convenient manner, which brackets are provided with suitable pulleys *a*, over which pass the cables or steel tapes *b*. To these cables or tapes are connected in any convenient manner the rods or bars E F, which are preferably of metal. The lower one of said rods or bars, as indicated at F, when not in use engages with hooked supports *c*, secured to the lower part of the window or to any convenient part of the building. The cables or steel tapes *b* after passing over the pulleys *a* extend through the sides of the window-frame, and thence over suitable pulleys *d* upon the inner sides of the frame. After passing over the pulleys *d* the cables or steel tapes *b* extend down into the room and connect with the two drums G upon the ends of a horizontal shaft *e*, having its bearings in suitable standards H or any form of frame that may serve the purpose of supporting the shaft and its connections.

Upon the shaft *e* is a suitable governor I, which may be of the usual construction, said governor having a friction-clutch K, as shown in Fig. 2 of the drawings.

Any well-known form of governor that will serve the purpose intended may be substituted for that shown, and any suitable form of friction-clutch may be used in connection with the governor, and therefore any description in detail of these parts of the device is deemed unnecessary.

A suitable electric motor, as indicated at L, may be used in connection with the governor, and in such case the same is provided with a shaft *f*, upon one end of which is a pinion *g*, which engages a gear-wheel *h* upon a shaft *i*, which shaft has its bearings in one of the standards H and a short standard M. The shaft *i* has a gear-wheel *k*, which meshes with the teeth of a larger gear-wheel *l* upon the shaft *e*, thereby forming a connection between the governor and electric motor. The governor revolves with the shaft, to which it is connected, and as the arms of the governor expand or are thrown outward by centrifugal action the friction-clutch K will be forced against its bearing *m* with more or less frictional action or pressure.

The governor and motor may be located inside the room of the building or in any place found most convenient or may be inclosed or placed in the wall or beneath the floor of the room, the position or location of the governor and motor being left discretionary with the person or persons introducing these fire-escapes in their buildings. Any desirable number of these governors and motors may be used as found necessary, and in place of an electric motor any other kind of motor may be used that will serve the same purpose, and when said motor is not in use the shaft *e* may

be turned by hand, and to provide for this one of the drums G has a suitable handle *n*.

The brackets, pulleys, governor and its connections, as well as the motor, may be variously modified or changed without in any manner affecting the essential features of the invention, and the pulleys upon the outer side of the building where they are subject to the elements may be protected by suitable casings, as shown at *o* in Fig. 1 of the drawings.

Should a building provided with my improved fire-escape connected to the several windows, as hereinbefore described, be on fire, those persons on the several floors when cut off by the flames or smoke from the ordinary means of egress would naturally seek the windows provided with means of escape and by the use of the device constituting my invention could readily lower themselves to the ground, catching on the rod or bar E with the hands and using the lower rod or bar F for a seat, as shown in dotted lines of Fig. 1 of the drawings, the weight of the person causing the shaft *e*, with the drums G, to turn upon its axis and unwind the cables or steel tapes *b*, the rotation of the shaft causing the governor to act, and thereby preventing too-rapid descent.

The fire-escape may be also operated from the ground by those coming to the rescue of the inmates of the building. In such case the motor, when electricity is used, will be connected with an electric current by means of suitable wires extending from the motor to a convenient point on the sidewalk, where suitable switches will be located, thus providing means for setting in motion or stopping the motor, as the case may demand. The motor will revolve the shaft *i* through the medium of the pinion *g* and gear-wheel *h*, and through the medium of the gear-wheels *k l* the shaft *e* will be revolved, causing the cables or steel tapes *b* to unwind and the bars E F lowered to convenient position for the rescuers to ascend thereon to any one of the windows and descend by reversing the motion of the motor, the motor having power sufficient to lift one or two men in ascending, thus access being had to any window in line of action.

Any suitable connection may be made between the motor and governor whereby either one or both may be used, as found necessary.

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

A fire-escape comprising pulleys upon the inner and outer sides of the window-frame arranged in pairs, suitable cables extending over said pulleys, two horizontal bars connected to the cables, hooked supports for the lower one of the bars to hold it in position when not in use, a rotatable shaft with a drum upon each end with which the cables engage, and a suitable governor connecting with the shaft, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WESLEY REES.

Witnesses:
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