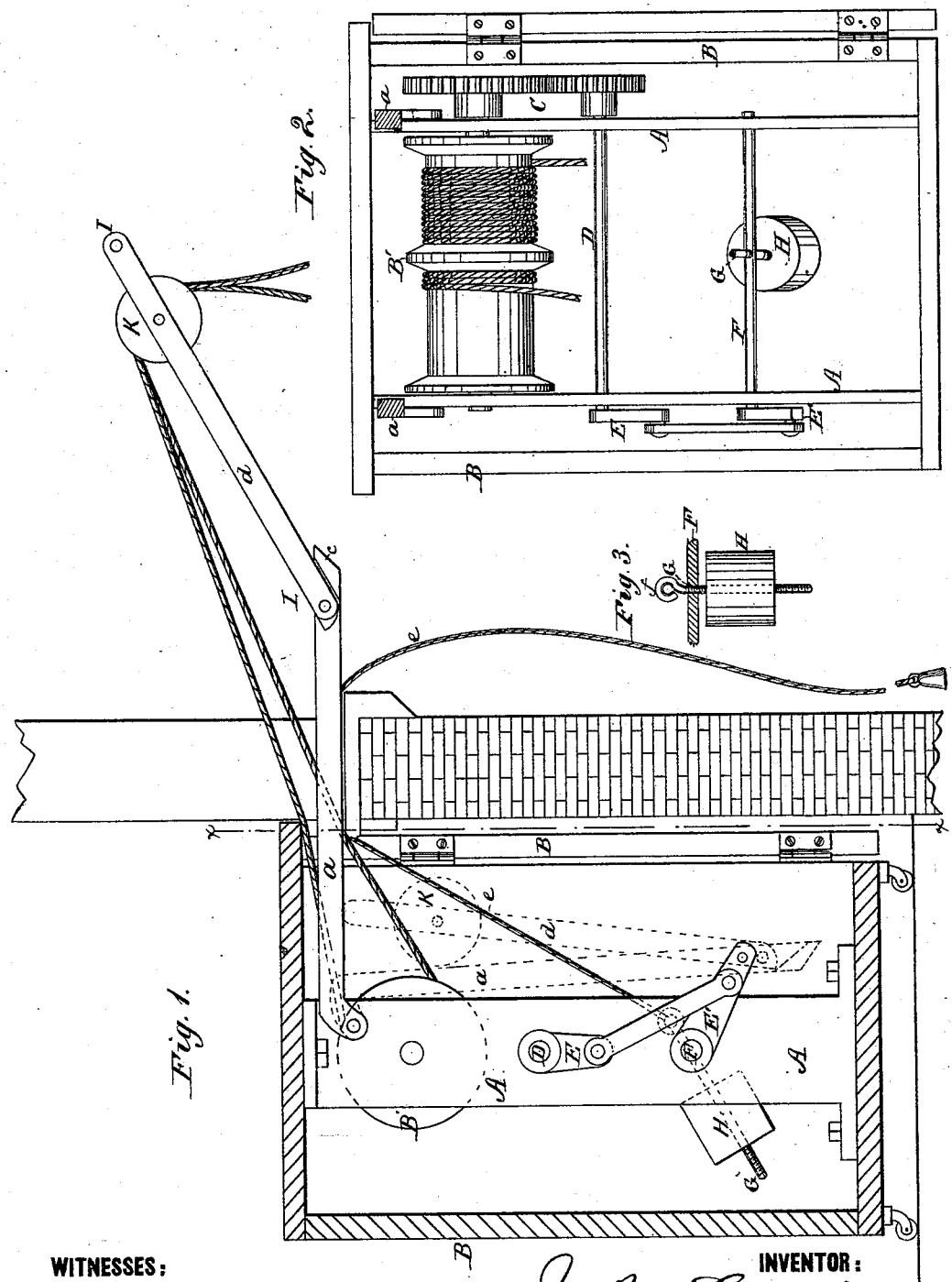
J. M. LESCALE.

Fire-Escape.

No. 204,057. Patented May 21, 1878.



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JOHN M. LESCALE, OF PAINCOURTVILLE, LOUISIANA.

IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. **204,057**, dated May 21, 1878; application filed April 17, 1878.

To all whom it may concern:

Be it known that I, JOHN M. LESCALE, of Paincourtville, in the parish of Assumption and State of Louisiana, have invented a new and Improved Fire-Escape; and I do hereby declare that the following is a full, clear, and exact description of the same.

The invention is an improvement in the class of fire-escapes in which ropes employed to lower persons from a building on fire to the pavement are attached to and wound in opposite directions around a rotary drum or pulley.

The improvement relates particularly to the employment, in connection with the double-grooved drum or pulley, of a pendulum or vibrating weight having an adjustable radius, so that it may be changed in position to regulate the rapidity of the descent of persons to the pavement.

The invention relates, also, to the construction and arrangement of a jointed extensible frame, in connection with a box or case having its front hinged to adapt it to open, as hereinafter described.

In the accompanying drawings, forming part of this specification, Figure 1 is a vertical section of the apparatus, showing it in position for operation. Fig. 2 is an elevation of the apparatus, with the jointed extensible frame in section.

The iron frame A is placed and secured inside a wash-stand, B, or some other suitable piece of furniture, which is placed upon casters, and made of sufficient weight and strength to suit the object for which it is intended. A double drum or pulley, B′, has its bearings in the upper part of the frame A, and two ropes, rope-ladders, or metallic chains are attached thereto, one in each groove or channel of the drum, and wound in opposite ways thereon. These ropes or chains have a hook on their free ends, from which, for greater convenience, any sort of adjustable seat may be suspended. When drum B′ revolves it imparts, through the medium of gearing C, increased revolution to shaft D, which, in turn, by means of cranks E E′, of unequal radius, imparts a rocking motion to shaft F, carrying suspended, by a screw-rod or radius, G, a pendulum or weight, H. The pendulum may be screwed up or down, as desired, on the rod or radius G, for the purpose of regulating the rotatory motion of drum B, for it is obvious that, the same power being applied to the end of one of the lines wound around the drum, the rotatory motion of the latter must be in proportion to the length of the radius upon which the weight H swings. Screwing up the weight toward shaft F must therefore give increased velocity to pulley B′, as screwing it down on said rod must produce the opposite effect. Upon the same principle, if the ropes attached to drum B′ are required to be unrolled at a given velocity, independent of the power applied, it is obvious that the rod or radius G must be proportioned to the power applied. This is done by screwing up weight H when the power is light, and screwing it down as the power is increased.

The above apparatus therefore presents, so far, the double advantage of being adapted to any power applied or any velocity required.

I indicates a jointed folding frame, hinged to the top of frame A, and having rollers K journaled in its outer end. The inner bars *a a* of the frame have lugs *c*, which support the outer bars *d d* when extended.

In case of emergency the wash-stand is rolled to some convenient place—say a window or balcony. If time allows it, the folding frame I is made to project over the window or balcony, as represented in the drawing, Fig. 1. Then, unhooking the end of either of the ropes wound around drum B′, the exposed occupant of the building on fire passes the rope first over one of the loose pulleys K attached to the folding frame I, then passes it around his body, hooks it, and lets himself down in a well-regulated and safe manner. By this time, if there are other inmates exposed, a second one unhooks the end of the other rope and also lowers himself to the ground, and in so doing causes the drum to wind up the first rope, ready to repeat the operation in favor of a third occupant, and so on. Every person descending winds one of the ropes on the drum, and thus prepares the machine for another.

Should it be required, a rope, *e*, with a weight at one end, is provided in the apparatus, which may be attached by one end to the hook *f* on rod or radius G, while the end carrying the weight is let down upon the pavement. By

means of this line so connected with the rod or radius G persons descending will be enabled to check their descent at any time; but while this may be very convenient when time enough is allowed, and order and calm prevail, yet the above apparatus is so constructed that in pressing emergencies no time is required but what is strictly necessary to roll the stand B to some suitable place, take hold of the end of one rope, and let one's self down—that is, a few seconds at most.

In addition to the above-mentioned advantages, the apparatus herein described will be found of great service to facilitate the ascension of outsiders into buildings in conflagration for the purpose of affording assistance, putting out fires, saving valuables, &c.

It will also be found a safe and convenient auxiliary to masons engaged in erecting isolated chimneys to ascend and descend.

I do not claim, broadly, a jointed extensible frame forming part of a fire-escape apparatus and serving to support the ropes when the latter is in use; but

What I claim is—

1. In combination with the drum or pulley and its attached ropes, the gearing C, crank-shafts D and F, having cranks E E′, connected by a link which permits rotary reciprocating movement of shaft F without allowing complete rotation, and the radius-bar G, having a weight attached, all as shown and described.

2. The radius-bar G, screw-threaded, as shown, the adjustable weight, and rock-shaft F, in combination with the rotary shaft D and drum B′, having ropes attached, as and for the purpose specified.

3. In combination with a box or wash-stand, B, having an open front, and the drum and ropes of the fire-escape apparatus proper, the frame consisting of the jointed bars *a* and *d*, hinged to the frame A within the box, in the manner described, whereby said frame is adapted to be extended or folded into vertical position within the box, as specified.

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Witnesses:
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