

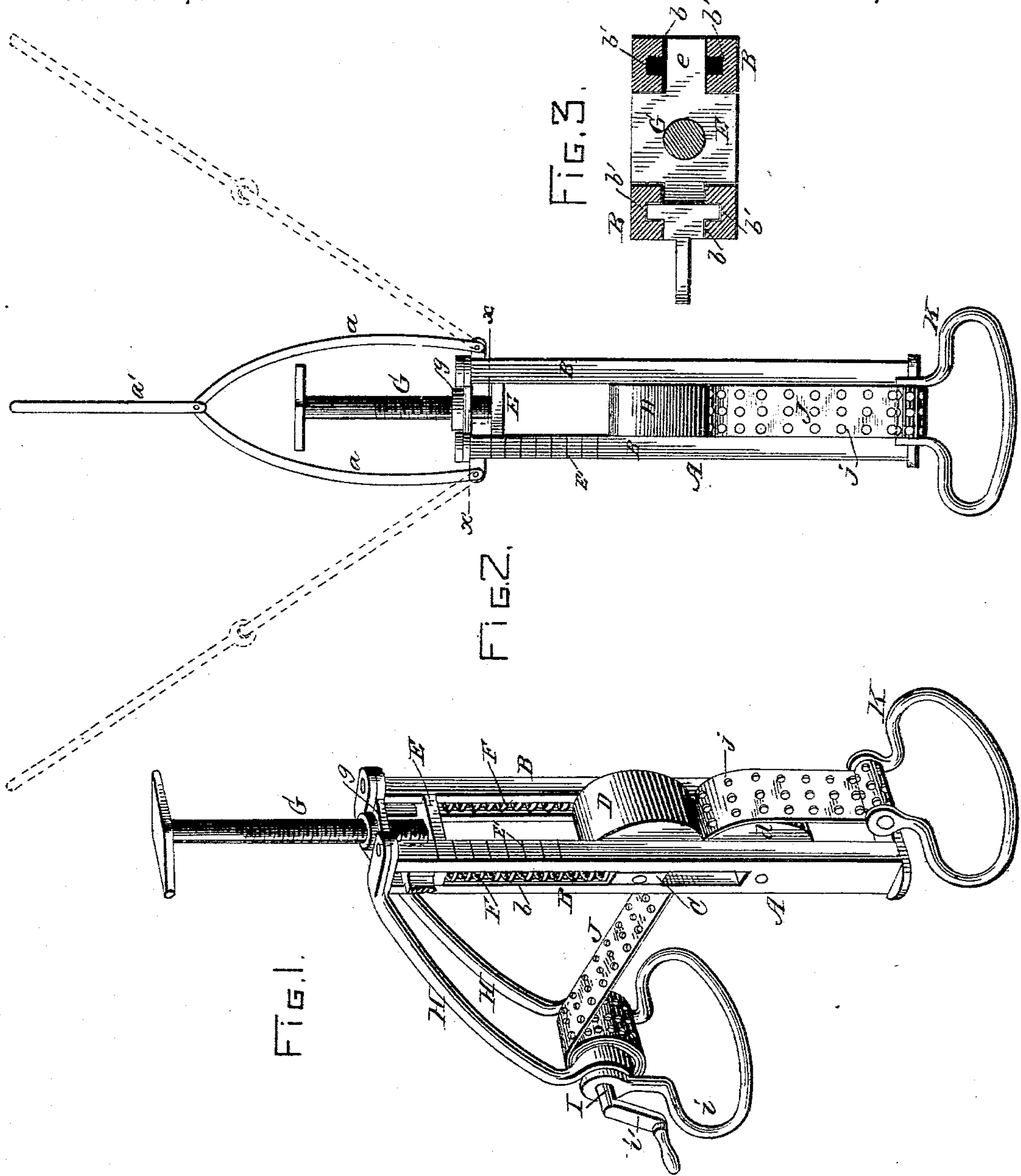
(No Model.)

M. C. CORRIGAN.

FIRE ESCAPE.

No. 300,347.

Patented June 17, 1884.



WITNESSES:

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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 300,347, dated June 17, 1884.

Application filed April 7, 1884. (No model.)

To all whom it may concern:

Be it known that I, MATTHEW C. CORRIGAN, a citizen of the United States, residing at Hollyrood, in the county of Ellsworth and State of Kansas, have invented certain new and useful Improvements in Reversible 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 and figures of reference marked thereon.

Previous to my invention it was common to provide reversible and portable fire-escapes with a suitable frame grooved upon its inner sides to receive boxes adapted to have a reciprocating motion therein, and having journaled in said boxes rubber or other flexible rollers, between which the belt passed, and at the ends of the frame followers were employed, operated by screws, so that by turning them in the proper direction the followers would be advanced or retracted to control the frictional bearing of the rollers against the belt, and thus regulate the rapidity of descent of the person using the escape. To this class of fire-escapes my invention relates; and the object thereof is to improve the several details of construction, which will be hereinafter described, and subsequently pointed out in the claims.

In the drawings, Figure 1 is a perspective view, and Fig. 2 a front elevation, of my machine; and Fig. 3 is a transverse section on line *x x*, Fig. 2.

The main frame A, which carries the escaping devices, may be provided with arms *a a*, secured near its upper end, and extending upward and joined to a rod, *a'*. This rod may be screw-threaded and adapted to be turned into a window-sill, door-jamb, or other suitable support; or it may be provided with a hook fitted to be caught over some suitable object. I also preferably pivot stay-rods to the upper end of the device, as indicated in dotted lines, Fig. 2, so as to steady the escape in position. By pivoting such stay-rods and arms *a* and rods *a'*, the device may be stored in a smaller space than if such parts were rigidly jointed. It is obvious, however, that such attaching rods and arms might be dispensed with and the apparatus secured to its support in any of the many ways well known in the art. The side bars, B, of the

main frame are slotted at *b* from their upper ends to a point slightly below the middle of the frame. These slots *b* are provided with grooves *b'*, formed at right angles to the main slot, as most clearly shown in Fig. 3. The journal-blocks C are fitted to and movable vertically in the slots and grooves *b b'*. The roller D is journaled in these blocks C, while the roller *d* is journaled in fixed bearings in the framing and vertically below the roller D. The follower-plate E fits between bars B, and has its end extensions, *e*, projected into slots *b*. Coil-springs F F are arranged and bear between the follower-plate and the journal-blocks, thus giving the upper roller a tension against the lower one, as will be understood. The said rollers are made or covered with india-rubber or other yielding material. The spring, it will be seen, gives the upper roller a constant tension on the lower one. I have found it desirable to adjust this tension to the weight of the person descending or to the rapidity with which it is desired to descend. To accomplish this I provide the set-screw G, which is turned through a threaded opening in the top plate, *g*, of the framing, and bears at its lower end against the follower-plate. By turning this screw the tension may be increased or diminished at will; and in order to secure certainty in the adjustments I provide the frame with a series of graduations, *E'*, with which the follower-plate registers. Thereby the degree of tension may be determined with accuracy at a glance.

It is manifest that the adjusting mechanism may be modified without departing from the broad principles of my invention. A lever could be readily adjusted to operate in lieu of the screw; but I prefer the latter, as it is easy of operation and compact, as will be understood.

Bracket-arms H are secured to and extend outward from the framing. Bearings are formed in the outer ends of these brackets for the reel I. A hand-loop, *i*, may be journaled on this shaft, as shown, for use in reversing the escape, as will be presently described. Where so desired, a crank, *i'*, thumb-piece, or other suitable handle may be secured on the reel, so the tape may be rewound.

The tape J is made of a thin flexible metal strip of a suitable width to run between the

elastic rollers and the side bars of the frame. One end of this tape is secured to reel I, and its other end is provided with a suitable handle, K. Perforations *j* are formed at close intervals through the tape to allow a circulation of air through it, and thus prevent its being too rapidly heated, as would frequently be the case with imperforate tapes.

In operation a person, by grasping handle K, may descend gradually and safely to the ground, the movable or presser roller serving as a brake to a too rapid descent. When one person has reached the ground by handle K and the tape has all been wound from the reel I, another person above may remove the reel from its bearings, and, grasping handle *i*, may descend in safety. A third person may now descend by grasping handle K, and so on till all are safe and out of the burning building.

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

1. In a fire-escape, the combination of the compressible roller journaled in fixed bearings, a similar roller journaled in movable bearings, springs arranged to bear against said bearings, whereby the rollers are pressed together, and a suitable tape, substantially as set forth.

2. The combination of the stationary roller, the movable roller, a follower-plate, springs

arranged between the follower-plate and the bearings of the movable roller, and a set-screw turned through a threaded bearing and pressing against the follower-plate, whereby the tension of the device may be regulated and adjusted, substantially as set forth.

3. The combination, with the stationary roller and the movable roller, of springs arranged to press against the bearings of the movable roller and force same against the stationary one, and means whereby the tension of said springs may be varied, substantially as set forth.

4. The fire-escape, substantially as herein described and claimed, consisting of the main frame, the stationary roller journaled therein, the movable roller journaled in bearing-blocks held in guides in the main frame, the follower-plate, the springs arranged between the follower-plate and the bearing-blocks, the adjusting-screw, the bracket-arms extended from the framing, the reel journaled therein, and the tape, substantially as and for the purposes specified.

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

MATTHEW C. CORRIGAN.

Witnesses:

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ROGER CAIN.