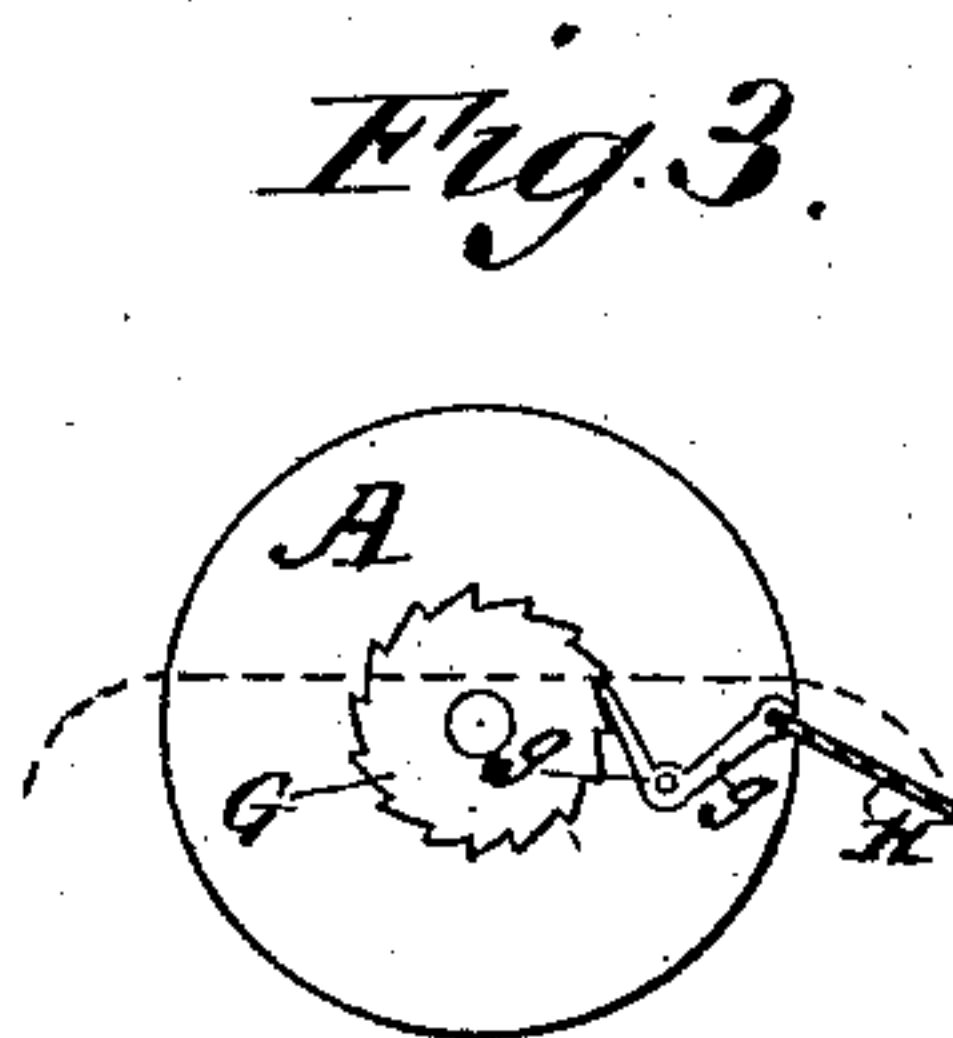
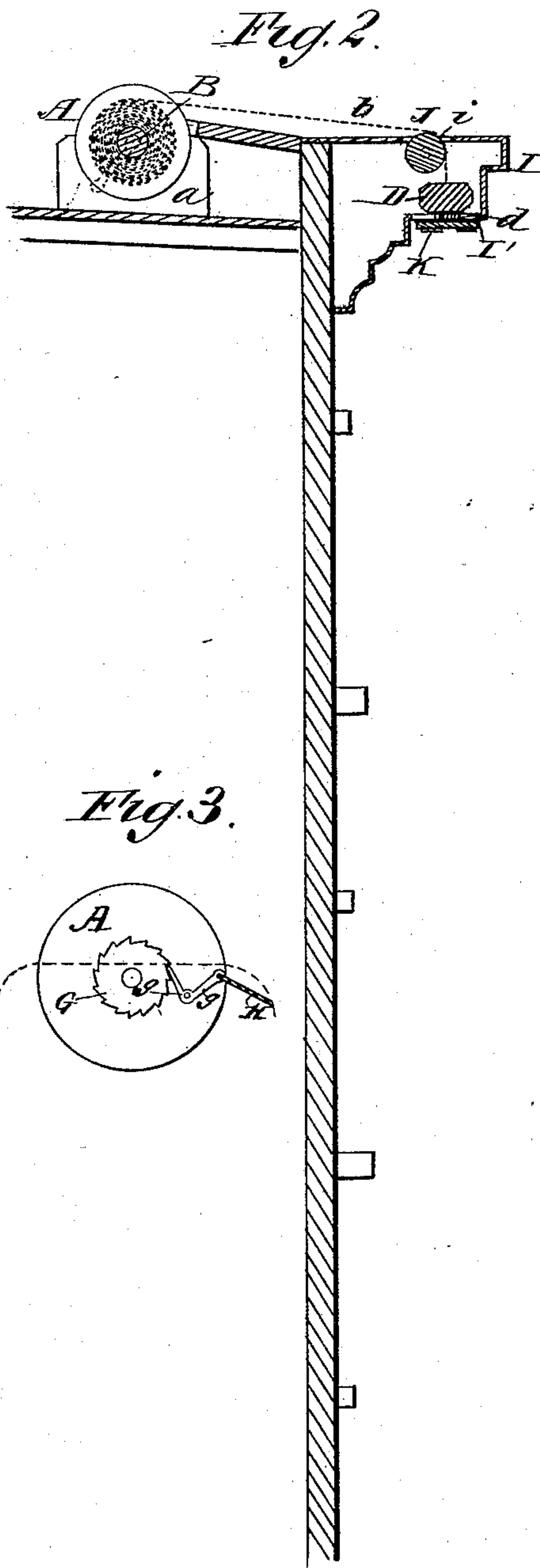
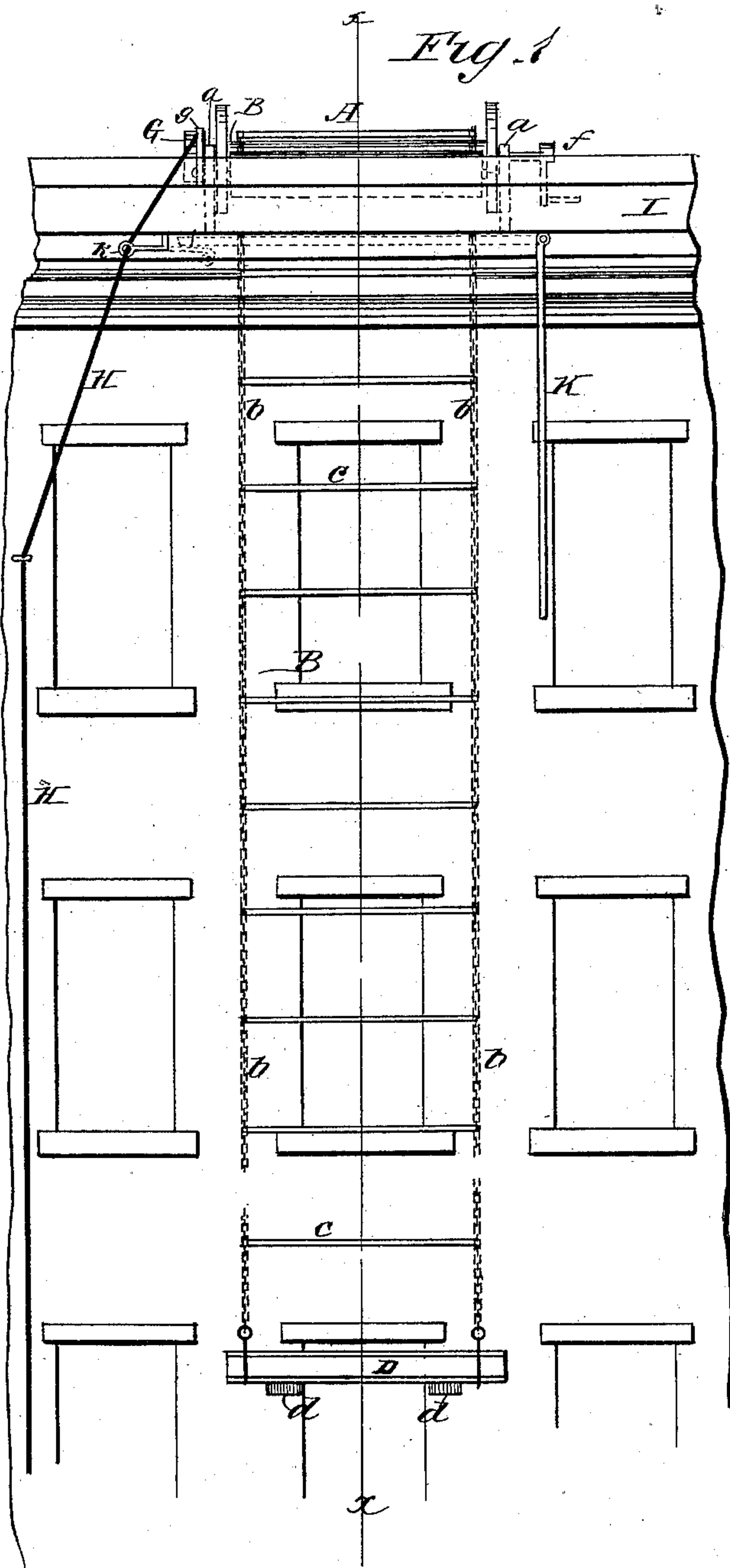


(No Model.)

J. T. MILLS.
FLEXIBLE LADDER.

No. 257,362.

Patented May 2, 1882.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOSEPH T. MILLS, OF BROOKLYN, NEW YORK.

FLEXIBLE LADDER.

SPECIFICATION forming part of Letters Patent No. 257,362, dated May 2, 1882.

Application filed February 13, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH T. MILLS, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Fire-Escape, of which the following is a full, clear, and exact description.

The object of my invention is to provide a cheap and efficient fire-escape; and to this end my invention consists in a novel construction and arrangement of parts, as hereinafter described and claimed.

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

Figure 1 represents my invention in front elevation as it appears when attached to a building and let down for use. Fig. 2 is a sectional elevation taken on the line *x x* of Fig. 1, the parts being represented as they appear when the ladder is wound up and the weight inclosed in the cornice; and Fig. 3 is an end elevation of the reel, showing the pawl and ratchet for retaining the reel.

A represents the winding drum or reel, to which one end of the ladder B is secured, and upon which it is adapted to be wound. The reel is journaled in the blocks *a a*, which are adapted to be secured upon the roof of the building by any suitable means. The ladder B is composed of the small chains *b b* and the rounds *c c* of iron. The lower end of the ladder is provided with the weight D, which is provided upon the under side with the rubber buffers *d d*, which prevent the weight striking too hard upon the pavement when the ladder is released and permitted to drop. One end of the reel is provided with the crank *f*, while the other end thereof is provided with the ratchet-wheel G, with which the bent pawl *g* engages, for holding the reel. This pawl is operated for releasing the reel by means of the wire, small chain, or rod H, which is attached thereto and runs down the wall of the building in easy reach from the windows, as clearly shown in Fig. 1.

In attaching the escape to the building the cornice I is first cut in its upper side or surface to form the slot *i*, and in its under side to form the larger opening, *I'*, to permit the passage

of the ladder through both openings, and the weight D through the latter, as will be understood from Fig. 2. The roller J is then journaled in the slot *i*, as shown in Fig. 2, and the trap or door K is hinged to the under side of the cornice, which door is adapted to close the opening *I'* and support the weight D, as shown in Fig. 2. The door is held in a closed position by the bent rod or button *k*, which is attached to the wire H in such a manner that the button will be moved for releasing the door simultaneously with the operation of the pawl for releasing the reel. By this means it will be seen that when the ladder is wound upon the reel A and the door K closed the whole escape will be entirely out of view, except the operating wire H, which is so small as to be hardly visible on the wall of the building. In the event of a fire, to put the escape in position for use it is only necessary to pull upon the rod or wire H, which will release the pawl *g* from the ratchet G, and at the same time release the door K, which will leave the ladder free to be drawn off from the reel by the weight D, which will drop to the ground or pavement, thus putting the ladder in position for furnishing a safe and easy escape from the windows of the building.

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

1. In a fire-escape, the combination, with the reel A, provided with the ratchet-wheel G, the ladder B, and the hinged door K, of the bent pawl *g*, the bent rod or button *k*, and the wire or cord H, attached to the said pawl and passing through an eye of the button, substantially as herein shown and described, whereby the said pawl and button will be simultaneously operated by a pull upon the wire or cord, as set forth.

2. The combination, with the ladder B and reel A, of the weight D, attached to the end of the ladder and provided with the buffers *d d*, substantially as described.

JOSEPH T. MILLS.

Witnesses:

H. A. WEST,
C. SEDGWICK.