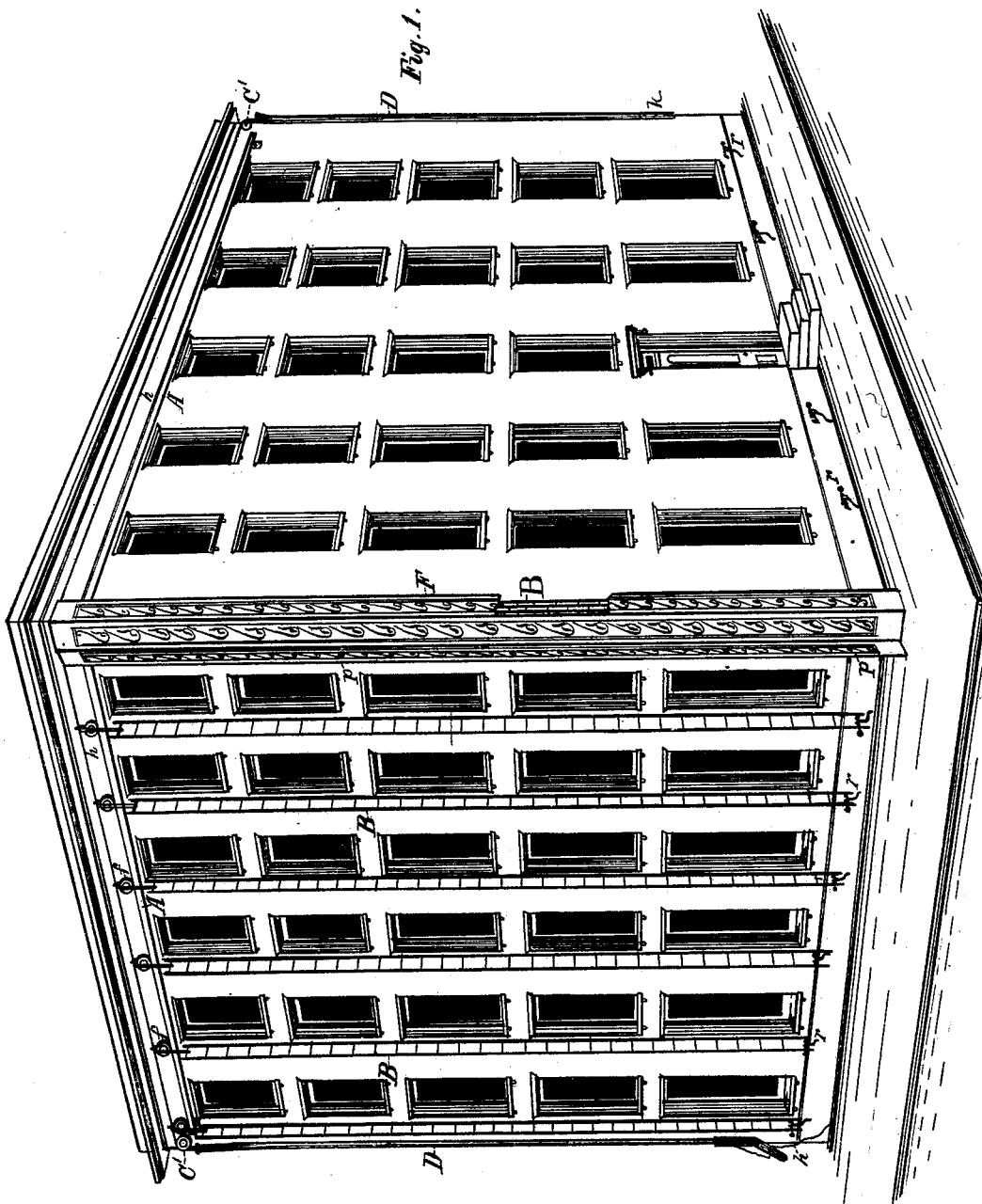


H. TAYLOR.  
Fire-Escape.

No. 219,781.

Patented Sept. 16, 1879.



Witnesses:

Geo. A. Royden

A. C. Eoder

Inventor:

Henry Taylor

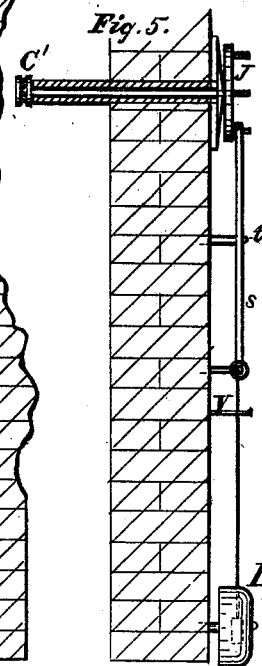
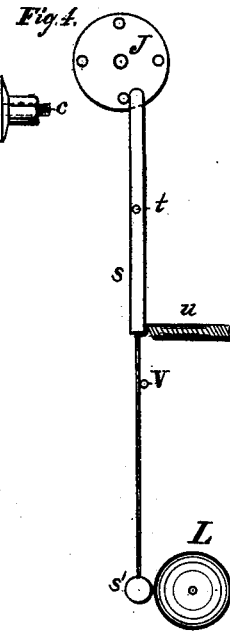
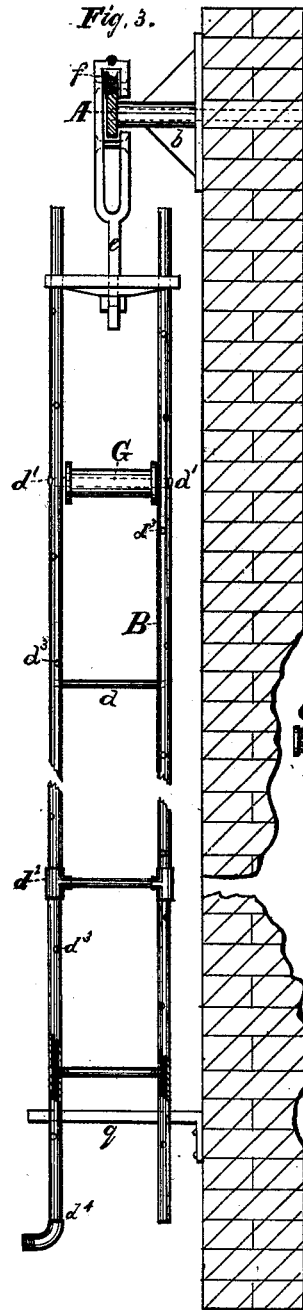
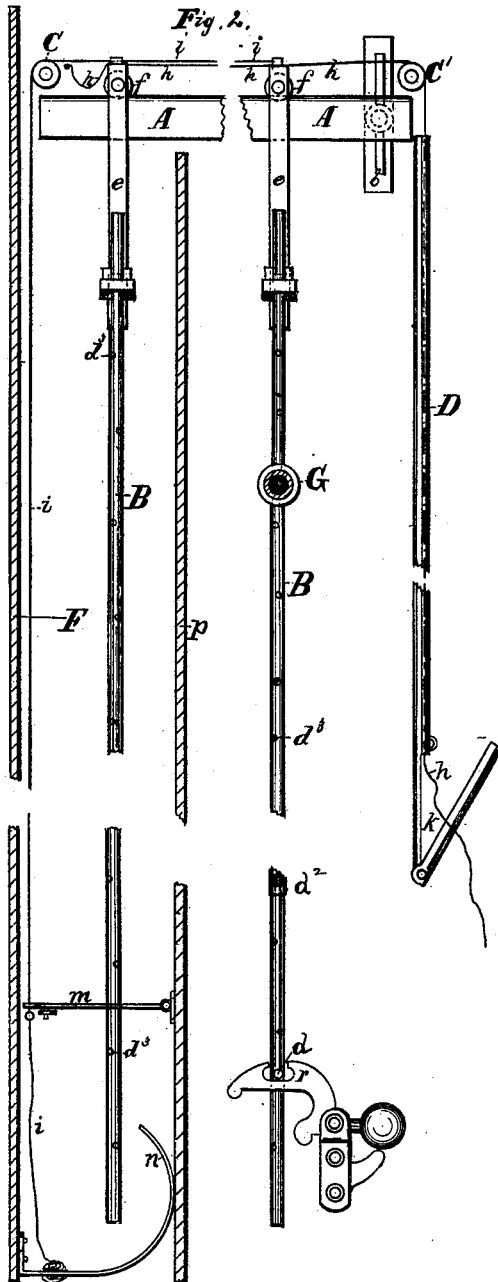
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# UNITED STATES PATENT OFFICE.

HENRY TAYLOR, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-THIRD OF HIS RIGHT TO SAMUEL H. HARRINGTON, OF SAME PLACE.

## IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. **219,781**, dated September 16, 1879; application filed July 10, 1879.

*To all whom it may concern:*

Be it known that I, HENRY TAYLOR, of the city of Baltimore and State of Maryland, have invented a new and useful Improvement in Fire-Escapes for Buildings, of which the following is a specification.

My invention relates to an improvement in fire-escapes for buildings of that class which are attached as a fixture to the outside of the building, the object being to provide an arrangement, consisting of a transverse rod affixed to and extending entirely across the wall of the building near the roof or cornice, from which ladders are suspended and adapted to be moved laterally to one corner of the building, where provision is made for their inclosure.

In the drawings annexed hereto and forming part of this specification, Figure 1 is a perspective view of a building with my fire-escape attached. Fig. 2 is a detail view, on a larger scale, of the fire-escape. Fig. 3 is a section of the wall, showing a full view of the ladder. Figs. 4 and 5 are detail views of the alarm.

The letter A designates a traverse-rod, which is securely attached to the wall near the roof by brackets *b* and bolts *c*, which pass through the wall; or it may be attached in any other suitable manner. This rod extends across the outside of the building, and serves to sustain and allow of the movement of the ladders, which preferably are made of iron pipe, such as is commonly used as gas-pipe. I contemplate the use of inch pipe B, while the rungs *d* are made of half-inch pipe. Most of the rungs enter but one side of the pipe, but at intervals of, say, every sixth rung a hole is drilled through both sides of the pipe, which allows the ends *d*<sup>1</sup> of the rung to be secured by riveting, or by any other means, so as to bind the side pipes.

Instead of securing every sixth rung in the manner just described, those to be secured may be provided on the ends with a right and left screw-thread and the hole for its reception, formed in but one side of each of the inch pipes and threaded, thus allowing this rung to be screwed in; or instead of this such rung may be secured by a T-coupling, *d*<sup>2</sup>.

The side pipes may be provided with small holes *d*<sup>3</sup>, and also at their lower extremity with a thread or an elbow coupling, *d*<sup>4</sup>, by which means hose may be connected for the purpose of forcing water up the pipe and allowing it to escape through the holes *d*<sup>3</sup>, thereby serving to keep the ladders cool when the same are exposed to heat.

A substantial hanger, *e*, is attached to the upper end of each ladder, and is provided with a roller, *f*, which rests on the traverse-rod; or it may be provided with two rollers, one to rest on and one below the rod. The roller serves to move the ladder along the rod.

It will be seen the ladders hang edgewise to the building, from which arrangement important advantages are derived, as by this position a person is able to get on from a window with greater ease and less risk than when the ladder is placed in the ordinary position. Then this edgewise position permits the ladders, when brought together at the end of the traverse-rod, to be inclosed, as hereinafter described.

At each corner of the house, and at the ends of the traverse-rod, are pulleys C and C', over which a line, *h*, passes. This line may be made of steel wire or any other material. One end of this wire line passes down the pipe D, in the present instance at the corner of the house. This pipe secures the line from being tampered with. The lower end of the pipe terminates in a box, *k*, of such construction that it may be secured by a lock.

To the line *h*, at suitable intervals, the hangers *e* of the ladders are attached, so that when the line is stretched a ladder will be placed in close position to every second vertical tier of windows, or to each tier, as desired. (See Fig. 1.)

A second wire line, *i*, is connected to the one above described at the point where is attached the hanger of the ladder nearest the pipe D, and passes over the pulley C and down into the casing or ladder-inclosure F. This case extends from the ground to the roof or cornice of the building, and may be made of ornamental iron grating, or of any suitable material.

A door, *p*, is hinged to the case, preferably

to open away from the building, and this door may extend from the ground all the way up, or only part of the way up, as desired.

A catch, *m*, is secured to the inner side of the door in such manner that one end is adapted to be lifted to free a lug on the lower side of the catch from a staple in the wall of the building. The free end of the catch is forked or bifurcated, and the wire line *i* is placed between the two prongs of the bifurcation, and a knot is made in the line, or any suitable obstacle is attached thereto below the catch *m*, so that when the line *h* at the other corner of the building is drawn on by a person who has opened the box *k* the first effect is to lift the catch, and thus to permit the door *p* to open; but the opening of the door may be facilitated by providing a spring, *u*, which shall be adapted to press it open. The door being open, the ladders may be drawn out and along the rod by continuing to pull on the wire line *h*.

A weight may be attached to the wire line *h*, and sustained at the top of the house by means of a trip, and, in connection with suitable devices, may be so arranged that upon releasing the trip the descent of the weight would draw the ladders along the traverse-bar.

The lower end of each ladder rests against a bracket, *g*, projecting from the wall, or the lower rung is held by a suitable catch, *r*, either of which may be used separately, or both of them may be used in conjunction.

In practice each ladder should be of a different length. The first one drawn from the inclosure, being shortest, will pass over all the brackets or catches but the last, against which it will strike, while the next ladder will be, say, from four to six inches longer, and will pass over all the brackets or catches until it rests against the bracket next to the ladder first drawn out. In like manner each succeeding ladder drawn from the inclosure is longer than the one before it.

If desired, the uppermost rung of each ladder may be provided with a roller or sheave, *G*, over which a rope may be thrown, thus enabling persons on the ground to aid a fireman in rescuing sick persons or others who may be unable to descend the ladder.

The letter *L* designates an alarm-gong, which is adapted to be operated when the ladders are withdrawn from their inclosure, the object of the alarm being to arouse the indwellers of the house on the occasion of fire, or when thieves seek to use the ladders for the purposes of robbery. For this purpose the pul-

ley *C'* is rigidly fixed to a shaft, which extends through the wall, the inner end of the shaft being provided with a trip, *J*.

A lever, *s*, is pivoted at *t*, so that the hammer *s'*, attached to one end of the lever, may strike the alarm-gong, when one of the pins of the trip forces the other end of the lever sidewise until, by the rotation of the trip, the lever is released.

*u* designates a spring, which draws on the lever, and *V* a stop-pin or stud to hold the hammer off from the gong.

It will be seen that when drawing the line *h* the strip *J* is caused to rotate, and the alarm is sounded.

Having described my invention, I claim and desire to secure by United States Letters Patent—

1. In a fire-escape, the combination of a traverse-rod, ladders suspended from the rod, and inclosure for the ladders, substantially as set forth.

2. In combination with a traverse-rod, ladders suspended from the rod edgewise to the building, and an inclosure for the ladders, as set forth.

3. In a fire-escape for buildings, the combination of a traverse-rod attached near the roof or cornice, ladders suspended by suitable hangers from the rod, a pulley, *C*, at the end of the rod, line *i*, connected to the ladders, and the ladder-inclosure *F*, as set forth.

4. The iron-pipe ladder having its sides *B* provided with small holes *d*<sup>3</sup>, as and for the purpose set forth.

5. In a fire-escape for buildings, the combination of a horizontal traverse-rod, hangers, each having a single roller grooved to rest on the rod, and ladders, each suspended from a hanger, with the rungs in a direction transverse with the traverse-rod, whereby a number of ladders on one rod may be brought together compactly, as shown and described.

6. The ladder-inclosure *F*, provided with a door having a catch, *m*, secured to its inner side, by which it is fastened, in combination with a line adapted to lift the catch, and connected to ladders suspended from a traverse-rod, as set forth.

7. In a fire-escape, the combination, with a traverse-rod and ladders suspended therefrom which are adapted to be moved by a line, of an alarm-gong operated by the line passing over a pulley mounted on a shaft, as set forth.

HENRY TAYLOR.

Witnesses:

CHAS. B. MANN,  
JNO. T. MADDOX.