(No Model.)

H. SMALL.

FIRE ESCAPE.

No. 287,880. Patented Nov. 6, 1883.

Fig 1

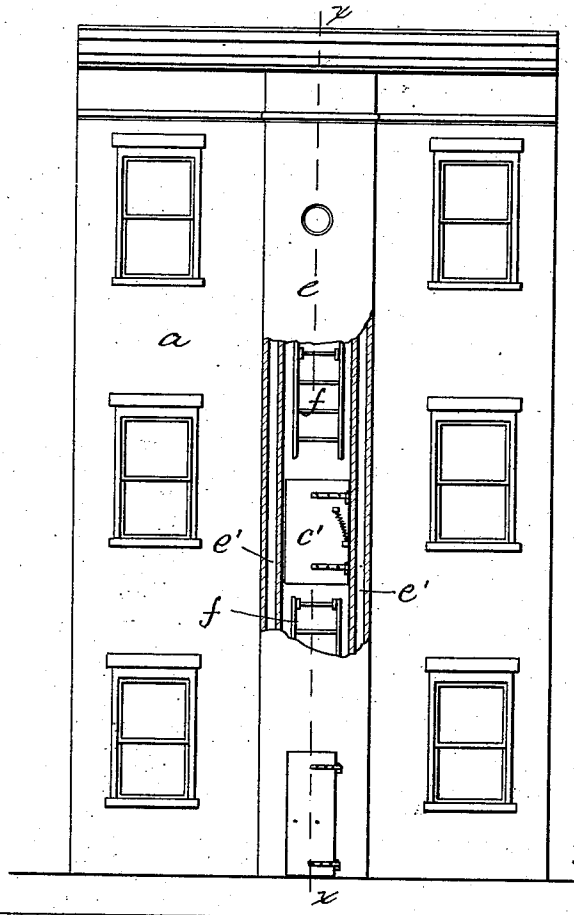
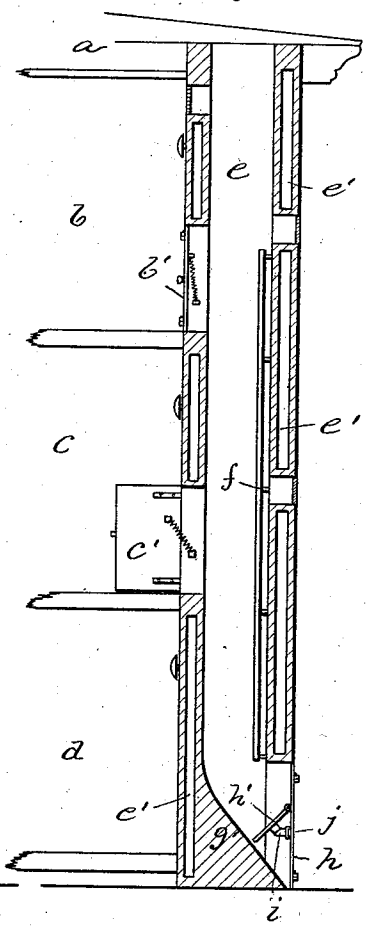


Fig 2



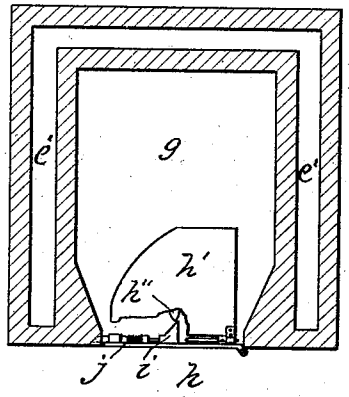


Fig 3.

Witnesses
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UNITED STATES PATENT OFFICE.

HENRY SMALL, OF HARTFORD, CONNECTICUT.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 287,850, dated November 6, 1883.

Application filed February 26, 1883. (No model.)

To all whom it may concern:

Be it known that I, HENRY SMALL, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a description, reference being had to the accompanying drawings, where—

Figure 1 is a view in elevation of a building provided with my device, part of the wall being cut away to show the interior of the shaft. Fig. 2 is a view of same in vertical section or plane denoted by line *x x* of Fig. 1. Fig. 3 is a view of the shaft in horizontal section on plane *y y* of Fig. 2.

My invention relates to the class of fire-escapes designed to be permanent features of a building, formed when the building is first erected, or built in afterward.

It consists of a vertical flue of fire-proof material provided with a fixed ladder, doors as a means of access from rooms adjacent to the flue, and a door on the street-level opening outward from the inclined bottom of the shaft or flue.

In the accompanying drawings, the letter *a* denotes a building; *b*, *c*, and *d*, rooms adjacent to the hollow shaft or flue *e*, built preferably with air-spaces *c'* in the walls as non-conductors of heat; *f*, a ladder, as of iron, firmly secured to the inner side of the flue on the wall opposite the doors *b' c'*, which open inwardly to the rooms.

The ladder is so fastened to the wall as to leave its sides free of obstructions to the hands of a person descending it.

The outer walls of the shaft are provided with windows of heavy glass, to light up the inside, and one or more ventillators are placed in the inner wall communicating with the rooms. At the bottom *g* of the shaft the rear wall is inclined forward in such manner as to throw any object that strikes upon it outward against the door *h*, that opens outward into the street. On the inner face of this door a plate or flap, *h'*, is hinged, held up by a spring, and having on the under side a cam-lug, *h''*, so arranged as to press against a reverse cam, *i*, fast to the spring-latch *j*, attached to the door. When any pressure—as the weight of a person—is thrown upon this flap, it forces it down, draws back the spring-latch, and unlocks and throws open the door, the inclined way aiding in the exit of the person from the shaft.

The doors from the rooms to the shaft are provided with locks or latches that can be operated from the rooms only, and not from the shaft. Gong-bells are placed in each room, near the door to the shaft, which door is plainly marked "Fire Escape."

I claim as my invention—

1. A vertical shaft or flue, *e*, having air-spaces *e'*, or their equivalents, formed in the walls, the vertical ladder *f*, secured to the inner face of the flue, entrance-doors *b' c'*, inclined bottom *g*, and automatic outlet-door *h*, all substantially as described.

2. In a fire-escape consisting of a shaft or flue, *e*, having an inclined bottom, *g*, a door, *h*, having a hinged flap, *h'*, and spring-bolt *j*, whereby the door is opened, substantially as described.

3. In combination, door *h*, bearing spring-bolt *j*, with cam *i*, and hinged flap *h'*, having cam-lug *h''*, all substantially as described.

HENRY SMALL.

Witnesses:

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WM. H. MARSH.