

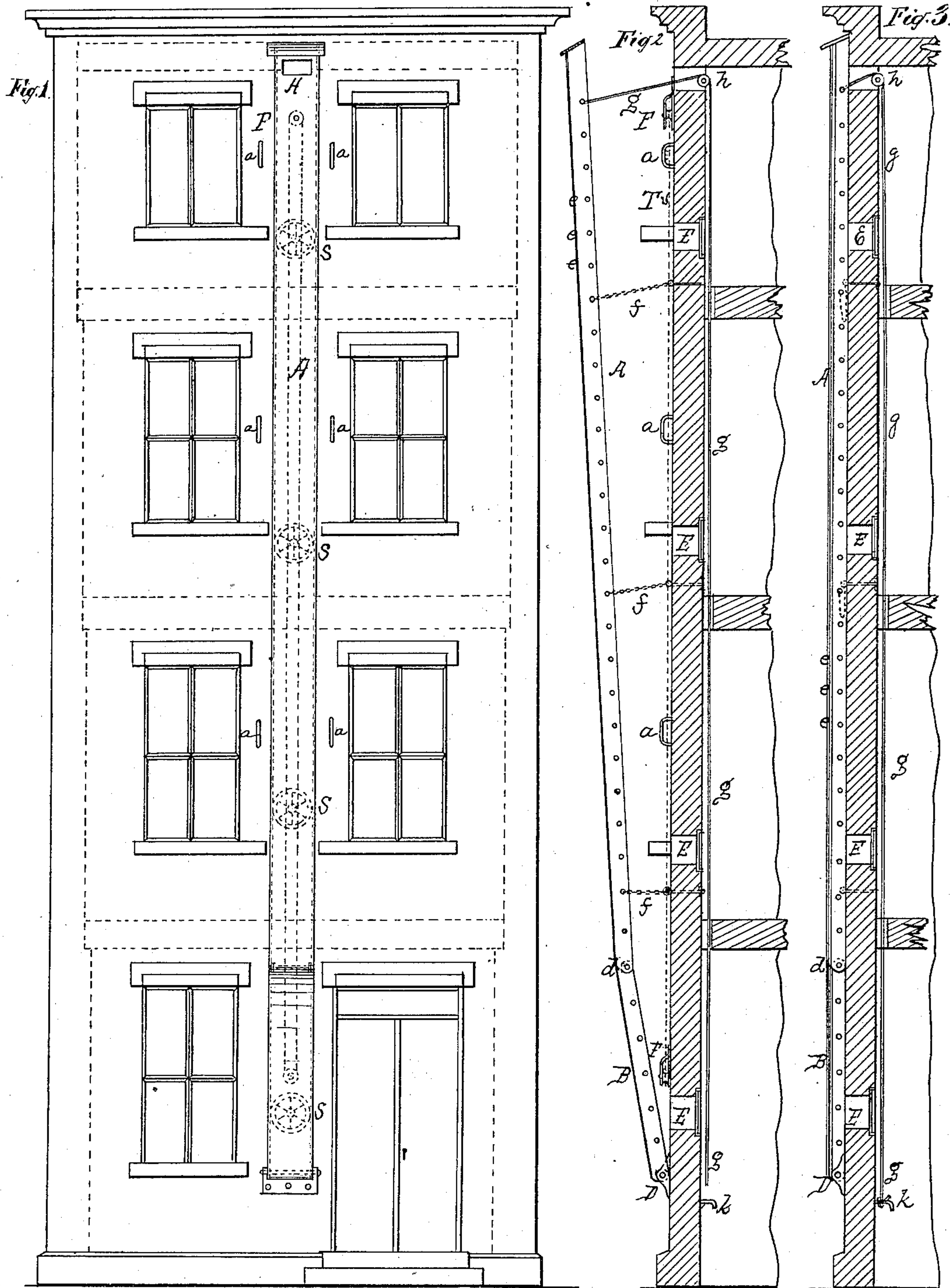
(No Model.)

J. W. EVANS.

COMBINED FIRE ESCAPE LADDER AND VENTILATING FLUE.

No. 311,239.

Patented Jan. 27, 1885.



Witnesses:
Henry Giddings
C. R. Clark

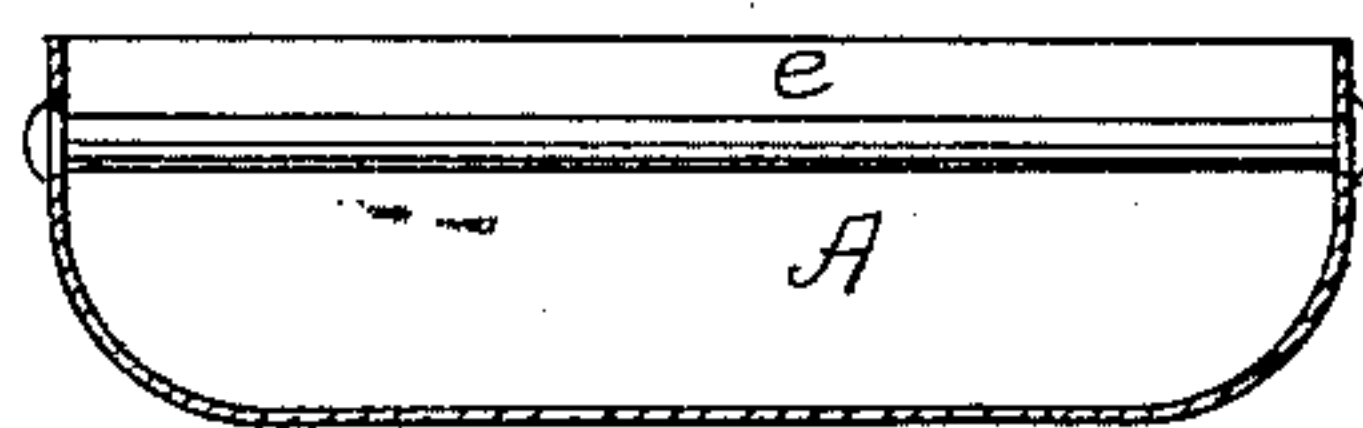


Fig. 4

Inventor
James H. Evans
By B. S. Clark
his atty.

UNITED STATES PATENT OFFICE.

JAMES W. EVANS, OF NEW YORK, N. Y., ASSIGNOR OF ONE-THIRD TO
BENJAMIN S. CLARK, OF SAME PLACE.

COMBINED FIRE-ESCAPE LADDER AND VENTILATING-FLUE.

SPECIFICATION forming part of Letters Patent No. 311,239, dated January 27, 1885.

Application filed March 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. EVANS, of the city of New York, in the county and State of New York, have invented certain new and
5 useful Improvements in a Combined Fire-Escape Ladder and Ventilating-Flue; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being
10 had to the accompanying drawings, which form a part of this specification.

The object of this invention is to provide houses, factories, and other buildings with neat, cheap, and strong fire-escape ladders free from all objectionable features in devices
15 heretofore used for said purposes, having a neat appearance when applied to the fronts or any other parts of buildings, and precluding the possibility of their use for gaining access to the building from the outside, or for
20 storing rubbish when not in use as a fire-escape, at the same time serving the purposes of a ventilating-flue from the several floors and rooms to which it is applied.

To enable those skilled in the art to comprehend and construct my invention, I will describe it more fully by reference to the drawings, on which similar letters indicate like
25 parts of the invention, as seen from different views.

30 Figure 1 is a front elevation of a house with my improved combined fire-escape ladder and ventilating-flue applied. Fig. 2 is a vertical section of the same, showing the ladder open as used for fire-escape. Fig. 3 is a vertical
35 section showing the ladder closed to the building and used as a ventilating-flue. Fig. 4 represents an enlarged cross-section of the ladder.

The ladder A is made by bending up the
40 two edges of thick sheet-iron, as shown in Fig. 4, the rounds *e e e* having their ends pass through and riveted in said edges or flanges, so formed by turning said edges of sheet-iron
45 up. Any number of sheets may be riveted together to produce the desired length. The ladder is made in two sections, A and B, which two parts are hinged together, as seen at *d d*, Figs. 2 and 3. The section B has its lower end hinged and secured to the

building, as seen at D D. A cord or rope, *g* 50
g g, is secured to the upper end of the ladder, and passed through an opening in the wall of the building and over a pulley, *h*, thence
down through the several rooms and floors to the lower floor, where its end may be drawn 55
down and secured to a fastening, as seen in Fig. 3, thereby closing the ladder against the wall of the building, the edges or flanges of the ladder fitting to the wall, forming a continuous flue from the bottom to the top of the 60
building. To utilize this flue I form openings *E E E* in the walls of the several rooms, either at the tops or at the bottoms, which openings lead in said flue or ladder, all such ventilating-openings being provided with registers, 65
as shown by dotted lines at *S S S*, Fig. 1. An opening, *H*, is made in the upper end of the flue to permit the air to pass out freely. I also secure handles *a a a* to the wall at the
70 sides of the windows, as seen in Figs. 1 and 2, and extend the window-sills, if desired, to facilitate the passage from the windows to the ladder. I also secure wheels or pulleys *F F*
to the wall at the top and bottom of the ladder, over which I pass an endless rope, a hook, 75
N, secured to said rope, by which baggage, children, or invalids may be let down. When the ladder is closed, the said pulleys and endless rope are protected and closed from view,
80 as shown by the dotted lines in Figs. 1 and 3, in which position the ladder is held by the rope *g*. When secured to the fastening *K*, the said rope may be provided with snap-hooks or any of the well-known means of connecting ropes and belts on each floor, so that per- 85
sons not provided with means to cut the rope may disconnect it by hand. When the rope is so cut or disconnected, the ladder falls of
its own gravitation to the position shown in Fig. 2, in which position it is held by the 90
chains *f f f*, one end of which is secured to the ladder and the other to the wall by any of the well-known means.

It will be seen that the least possible time, labor, or intelligence is required from the per- 95
son to put the ladder in position in order to escape. It is also well-known that such escape becomes necessary often at short notice,

when persons have no time to properly clothe or prepare to go down the ladders or escapes now in use without undesirable exposure to the crowds below.

5 With my improved fire-escape the person passing down is protected from the view of the greater part of the crowd below.

What I claim as new, and desire to secure by Letters Patent, is—

10 1. The ladder constructed of sheet metal A, inclosing the rounds *e*, in combination with

the joints D and *d*, chains *f f f*, and rope *g*, substantially as described, and for the purpose specified.

2. The ladder A, constructed to form also 15 a flue, in combination with the ventilators E E E, substantially as described, and for the purpose specified.

JAMES W. EVANS.

Witnesses:

CHAS. R. CLARKE,
NATHAN LEVENSON.