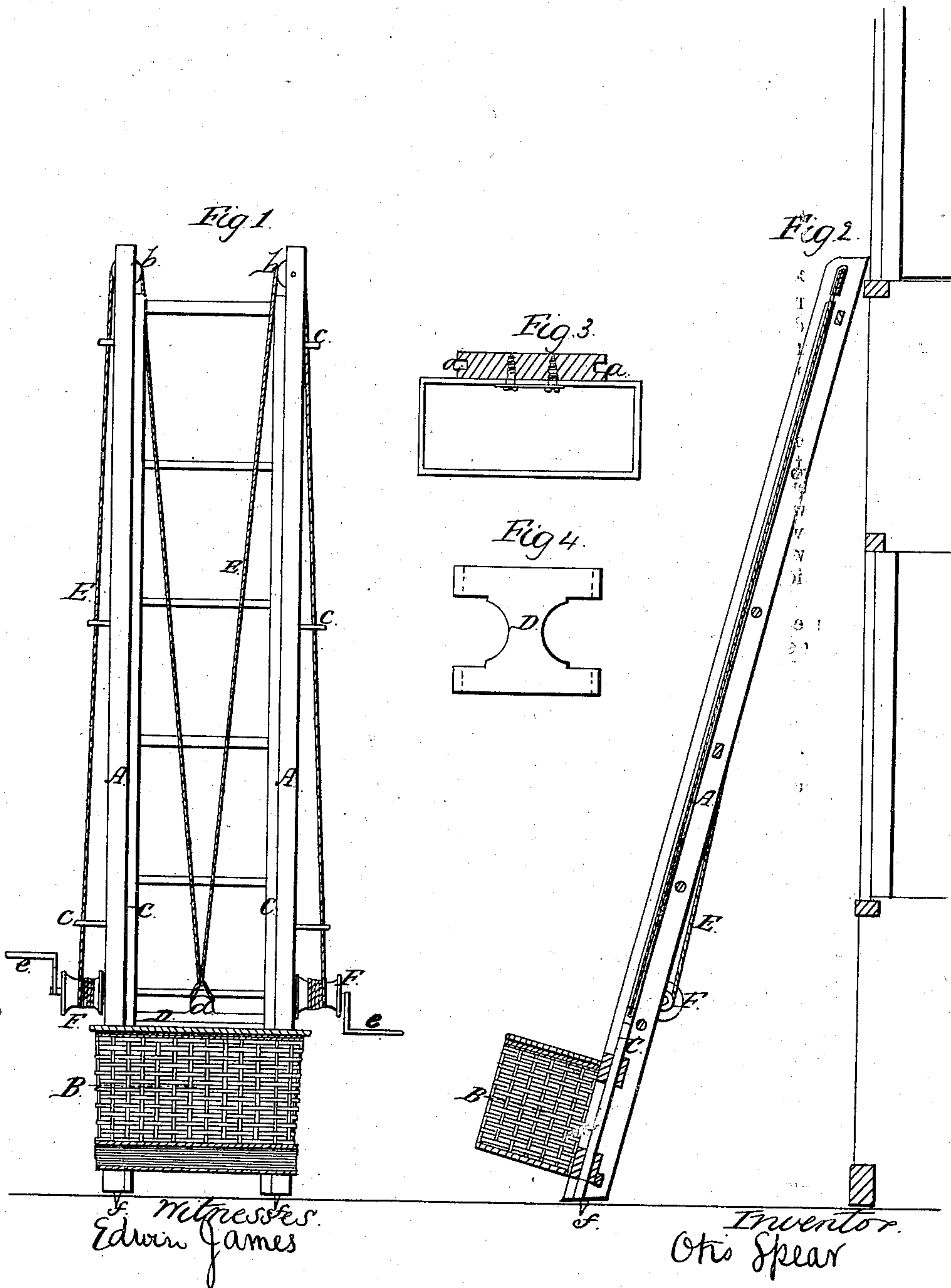


O. SPEAR.  
FIRE ESCAPE.

No. 86,600.

Patented Feb. 2, 1869.



John S. Hollingshead Jr.

per Holmead & Hollingshead  
Attorneys.



OTIS SPEAR, OF BALTIMORE, MARYLAND.

Letters Patent No. 86,600, dated February 2, 1869.

IMPROVED FIRE-ESCAPE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, OTIS SPEAR, of Baltimore city, county of Baltimore, and State of Maryland, have invented certain new and useful Improvements in Elevators and 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 accompanying drawings, and the letters of reference marked thereon, making part of this specification, in which—

Figure 1 is a front view of my machine.

Figure 2 is a side view.

Figure 3 is a plan view of the basket and its frame-work, showing the grooves.

Figure 4 is a plan view of the frame-work of the basket.

The nature of my invention consists in an improved manner of constructing elevators and fire-escapes.

By my machine the old system of carrying bricks, mortar, &c., in hods, upon the shoulders of the laborers, is avoided, and both labor and expense are saved, and danger obviated.

In crowded cities, where a large proportion of the inhabitants are compelled, by force of circumstances, to live in tenement-houses, where, in cases of fire, as has frequently been the case, many lives are lost, simply because no means of escape are open to them, and particularly where timid and aged women and helpless children are unable, by reason of their natures, to descend a ladder when the flames are rapidly enveloping the building in which they are, my invention is peculiarly applicable, since, by means of its construction, a comparatively safe conveyance is presented.

My invention can also be easily adapted to the numerous hook-and-ladder companies with but very little expense, and without interfering with their present usefulness.

To enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

A is the ladder.

B is the basket or box.

C is the rabbet or track, attached to the inside of the side pieces of the ladder.

D is the frame-work, to which is attached the basket, and on each end of which there are grooves, *a*, which work on the rabbet C.

*b* are the pulleys in the top of the side pieces, over which works the rope E.

E is the rope, by means of which the basket is elevated or lowered.

F is the windlass, which is fastened to the lower end of the ladder, and to which is attached one end of the rope.

*c* are the rings, fastened on the outside of the uprights of the ladder, through which passes the rope.

*d* is the head-piece, attached to the frame-work of the basket, to which is fastened the rope.

*e* are the crank-handles, by means of which the windlass is worked.

*f* are spikes in the bottom of the uprights, to keep the ladder from slipping.

The operation is as follows:

One end of the rope being fastened to the head-piece of the frame-work, to which is attached the basket, the other end is passed over the pulleys *b*, and through the rings *c*, and fastened to the windlass F. The windlass is then turned by means of the crank-handles *e*, and rope wound around it, thus raising the basket.

Having thus fully described my invention,

What I claim therein as new, and desire to secure by Letters Patent of the United States, is—

The ladder A, when the same is provided with rabbets C C and pulleys *b b*, the same being in combination with the windlass F, cord E, grooved frame D, and conveyer B, and the whole is so constructed and arranged as to operate substantially as described, as and for the purpose specified.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

OTIS SPEAR.

Witnesses:

EDWARD V. STARR,

THOS. T. NELSON.