J. G. RICHARDSON.

Fire-Escape.

No. 200,844. **Patented March 5, 1878.**

Fig. 1.

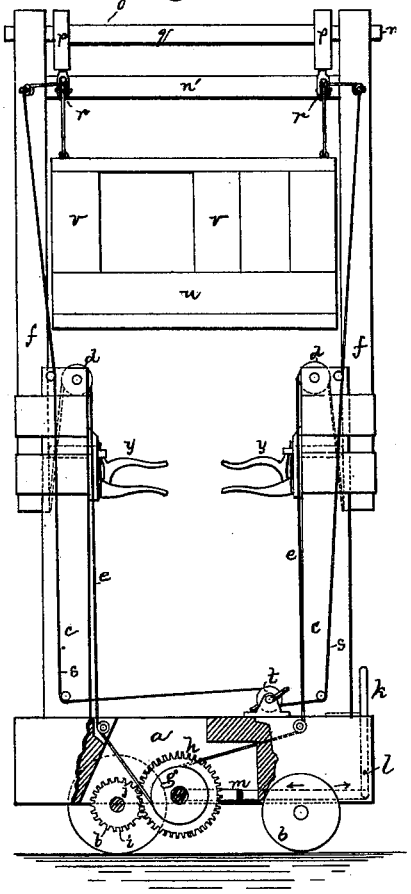


Fig. 2.

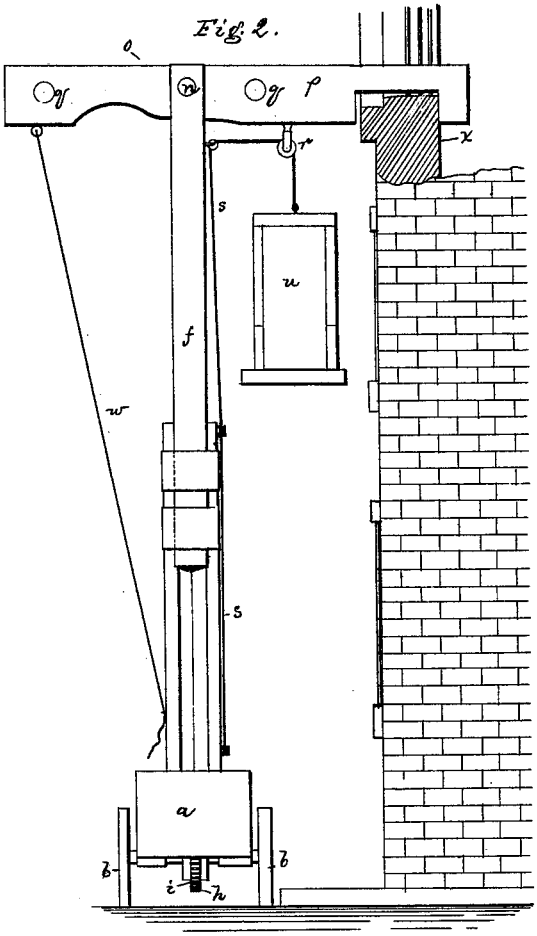
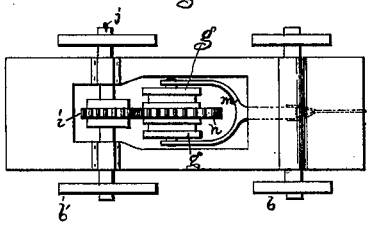


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

JAMES G. RICHARDSON, OF CAMBRIDGEPORT, MASSACHUSETTS.

IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. **200,844**, dated March 5, 1878; application filed June 16, 1877.

To all whom it may concern:

Be it known that I, JAMES G. RICHARDSON, of Cambridgeport, in the county of Middlesex and State of Massachusetts, have invented an Improved Fire-Escape, of which the following is a specification:

The object of my invention is to provide a portable fire-escape, which shall be simple in construction, easily operated, and capable of being readily moved to any place and adjusted to any height desired, so as to admit of persons escaping from a burning building being lowered to the ground easily and without danger.

The invention consists of a wheeled truck provided at its opposite ends with posts or uprights having at their upper ends pulleys, over which pass ropes or chains connected to the lower or butt ends of two smaller uprights, running in grooves or ways on the main uprights, and confined therein by suitable bands.

The other ends of these ropes or chains pass over or around suitable guide-pulleys to a drum arranged in the body of the truck near the rear axle, on which latter is a toothed wheel that gears into another toothed wheel on the winding-drum, the wheel on the said drum being thrown into and out of gear with the wheel on the axle by a hand-lever arranged in any convenient position on the truck.

By means of the winding-drum and the ropes or chains connecting them the movable uprights are raised or lowered, as desired.

On the top of the movable upright is pivoted a frame, the inner end of which is designed to engage with the bottom of the window, and to this frame is hung by pulleys a car or receptacle, which can be raised and lowered by means of a rope or chain passing over the pulleys and extending to the truck, where it is wound on a drum or shaft, or it can be operated by hand.

In the drawings, Figure 1 is a side elevation of my device, with the central portion of the truck-body broken away to show the gears on the winding-drum and the rear axle, and the method of operating them. Fig. 2 is an end view, showing the lever-frame hooked into the window of a building. Fig. 3 is a reverse plan or under-side view of the truck, showing the winding-drum and gears and the means for throwing them into and out of action.

a is the truck-body; *b b'*, the wheels.

Upon the rear axle is a gear, *i*, which is designed to engage with a gear, *h*, upon a drum or shaft, *g*, the bearings of which latter are arranged within a frame that is allowed a longitudinal movement, so as to admit of the two gears being brought into or out of contact, as required. This is effected by means of a lever, *k*, fulcrumed in the truck and connected to the frame which bears the drum *g*.

c c are the main uprights, firmly secured to the truck.

At the side of the uprights *c c* are the movable uprights *f f*, which are secured by means of bands or guides, so as to admit of their being elevated, which is effected by means of ropes or chains passing over pulleys in the upper part of the stationary uprights *c c* to the drum or shaft *g*.

The movable uprights *f f* are held in their elevated position by means of stops *y y*, which may be transverse bolts, or other suitable device.

To the upper ends of the movable uprights *f f* is fulcrumed a lever-frame, *o*, the two sides *p p* of which are formed with projections or hooks, which are designed to engage with the lower part *x* of a window-frame, and to the opposite end of the frame *o* is attached a rope, *w*, by means of which the frame can be tilted to raise it from the window-frame or guide it wherever necessary.

To the under side or arm of the portion *p* of the frame *o* is attached a pulley, *r*, over which passes a rope, *s*, which supports a car or receptacle, *u*, which is designed to receive persons escaping from the windows of a burning building. The car *u* is provided with folding or sliding shutters *v*, for protecting the occupants from the flames or smoke.

I claim—

1. The combination, in a fire-escape, of the truck *a*, the stationary uprights *c c*, the movable uprights *f f*, provided with the stops *y y*,

and the tilting frame, having the sides *p p* provided with projections or grappling-hooks, as and for the purpose set forth.

2. The tilting frame *o*, operated by the rope *w*, at the rear, and provided with the grappling-arms *p p*, in combination with the movable car or receptacle *u*, provided with the sliding shutters *v v*, as and for the purpose set forth.

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

JAS. G. RICHARDSON.

Witnesses:
J. H. ADAMS,
L. H. LATIMER.