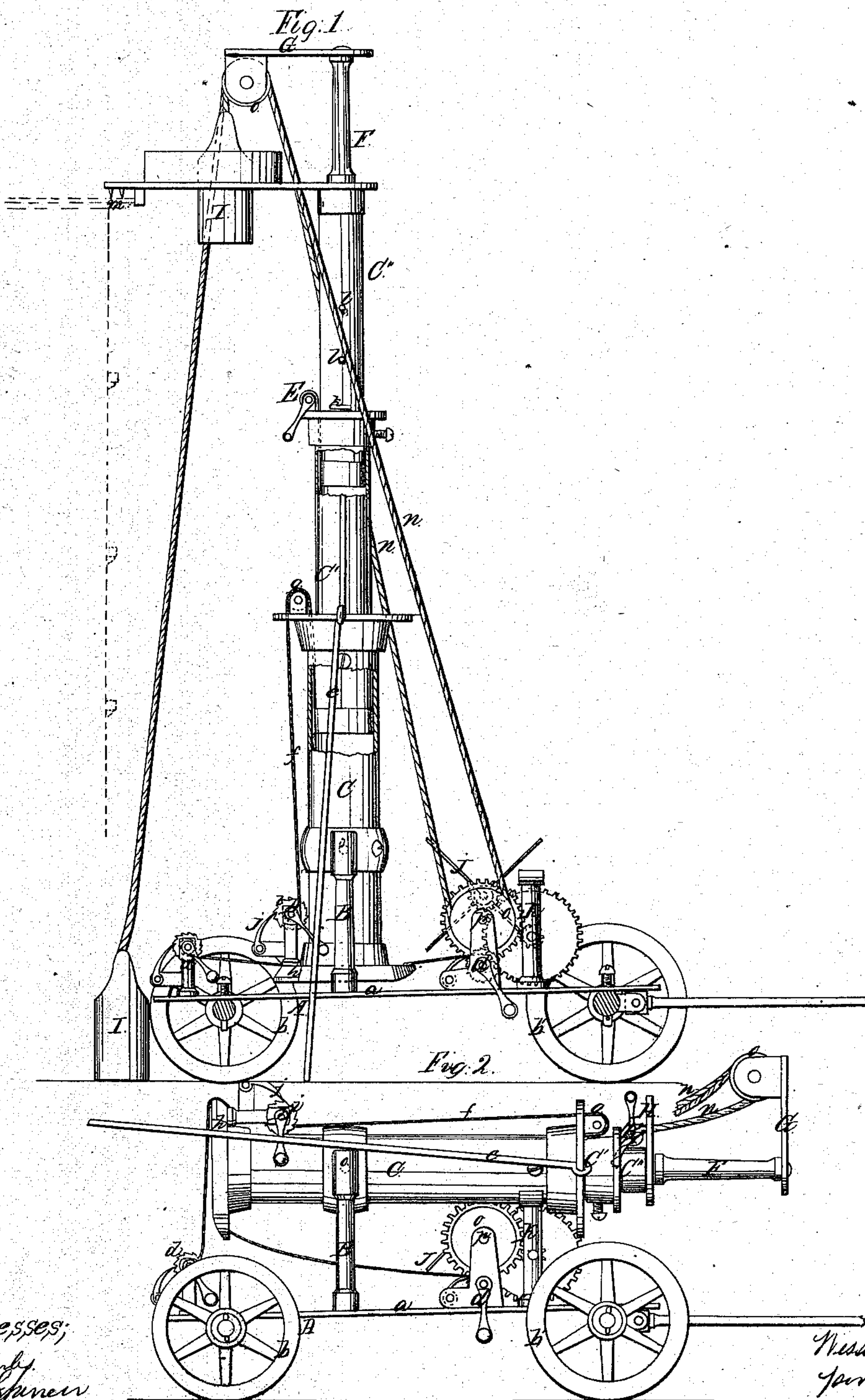


*W. Sawyer.*

*Fire Escape.*

*N<sup>o</sup> 35,413.*

*Patented May 27, 1862.*



*Witnesses;*  
*W. C. Smith*  
*R. S. Spencer*

*Inventor*  
*W. Sawyer*  
*per* *Mum & Co.*  
*Attorneys*



# UNITED STATES PATENT OFFICE.

WESLEY SAWYER, OF LOWELL, MASSACHUSETTS.

## IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. 35,413, dated May 27, 1862.

*To all whom it may concern:*

Be it known that I, WESLEY SAWYER, of Lowell, in the county of Middlesex and State of Massachusetts, have invented a new and Improved Fire-Escape; 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, making a part of this specification, in which—

Figure 1 represents a sectional elevation of my invention when elevated and ready for operation. Fig. 2 is a side elevation of the same when lowered down on the truck and ready to be drawn from place to place.

Similar letters of reference in both views indicate corresponding parts.

This invention consists in the combination and arrangement of one or more struts or tormentors, *e*, with a series of tubes one within the other, and made to extend in the manner of a telescope, and combined with a truck and with a swivel-platform and with rising and falling cars or baskets, and with a series of windlasses in such a manner that said tubes can be brought in a vertical position and extended until the platform comes on a level with that portion of a building from which it is desirable to lower persons or articles, or that said tubes can be drawn in and brought in a horizontal position ready to be moved through the streets.

It consists also in combining two rising and falling baskets with each other and with a revolving fan in such a manner that the velocity of the descending basket is checked by the action of the fan, and that one basket rises while the other descends.

To enable those skilled in the art to fully understand and use my invention, I will proceed to describe its construction and operation with reference to the drawings.

The truck A, which consists of a platform, *a*, resting on four wheels, *b b'*, is provided with two standards, B, which form the bearings for pivots *c*, on which the lower or main tube, C, is suspended. Two windlasses, *d d'*, one in front and the other behind the standards B, serve to raise the tube a vertical position, as shown in Fig. 1, or to lower it to a horizontal position, as shown in Fig. 2. The operation of raising and lowering the tube is facilitated by tormentors *e*, which are hinged to the upper

end of said tube, and which also serve to keep the same steady when it is raised to a vertical position.

A second tube, C', is made to slide up and down in the first tube, C, and a cord or chain, *f*, which extends from the bottom of the second tube, C', over a guide-roller, *g*, on the top edge of the first tube and down to a windlass, D, which is secured to a flange, *h*, projecting from the bottom of the tube C, serves to raise or to lower the tube C'. A pawl, *j*, and ratchet-wheel *i*, which are connected to the windlass D, retain the tube C' in the desired position.

Another windlass, E, on the top edge of the tube C', serves to raise and lower the tube C'', which works in the interior of the tube C'. A pin, *k*, which is inserted into holes *l* in the sides of the tube C'', serves to retain said tube in the desired position.

From the top of the tube C'' rises the pole F, which bears the bracket G, and which retains and forms a swivel for the platform H. This platform is elevated by extending the tubes C C' C'', and it is now hooked on to a window-sill or to some convenient spot on a building from which persons or articles are to be saved, and in order to afford to said platform a good hold it is provided with spikes *m* on its under surface.

An aperture in the center of the platform H gives the means to reach the cars or baskets I, which are suspended from the two ends of a rope or chain, *n*, said chain passing over rollers *o*, that are firmly secured to the bracket G on the top of the pole F. The baskets are secured to the ends of one and the same chain, so that if one of the baskets descends the other is made to ascend. The speed of the descending basket is checked by a fan, J, to which motion is imparted by passing the chain *n* once or twice around a sheave, *o'*, on an arbor, *p*, which connects by a series of gear-wheels with the arbor of the fan. If a person steps into one of the baskets, the chain is drawn tight on the sheave *o'*, and as the basket descends a rapid rotary motion is imparted to the fan, and the resistance offered by the air to the motion of said fan checks and regulates the speed with which the descending basket moves.

By increasing the number of the tubes C my fire-escape can easily be so constructed that it



reaches to the top of the highest building, thus affording the means of escape in case of danger from fire or from any other cause. The tubes are of metal, and they can be taken very thin and light and still they will retain sufficient strength to bear the strain to which they may be subjected; and since all the other parts as well as the tubes can be made of iron or metal my apparatus is not likely to be deranged by the action of the fire, and it can be made available in such cases where ordinary ladders or other fire-escapes are useless.

When not used, the tubes are lowered one into the other, and they are now turned down to a horizontal position, as shown in Fig. 2 in the drawings. In this position the tubes are supported by an arched standard, K, which rises from the platform of the truck A. In this position the apparatus can easily be drawn through the streets or put up in an engine-house or in any other convenient place.

This apparatus is very strong and durable, it is easy and simple in its operation, it can be

brought in close proximity to the spot where the danger is most imminent, and it is comparatively cheap in its construction.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination and arrangement of one or more struts or tormentors, *c*, with a series of tubes, C C' C'', supported by pivots *c* and made to extend in the manner of a telescope, and combined with the truck A, swivel-platform H, and rising and falling baskets I, constructed and operating substantially as and for the purpose set forth.

2. The combination of the rising and falling baskets I, chain *n*, and revolving fan J, constructed and operating in the manner and for the purpose described.

WESLEY SAWYER.

Witnesses:

GARDNER BAILEY,  
T. E. PARKE.