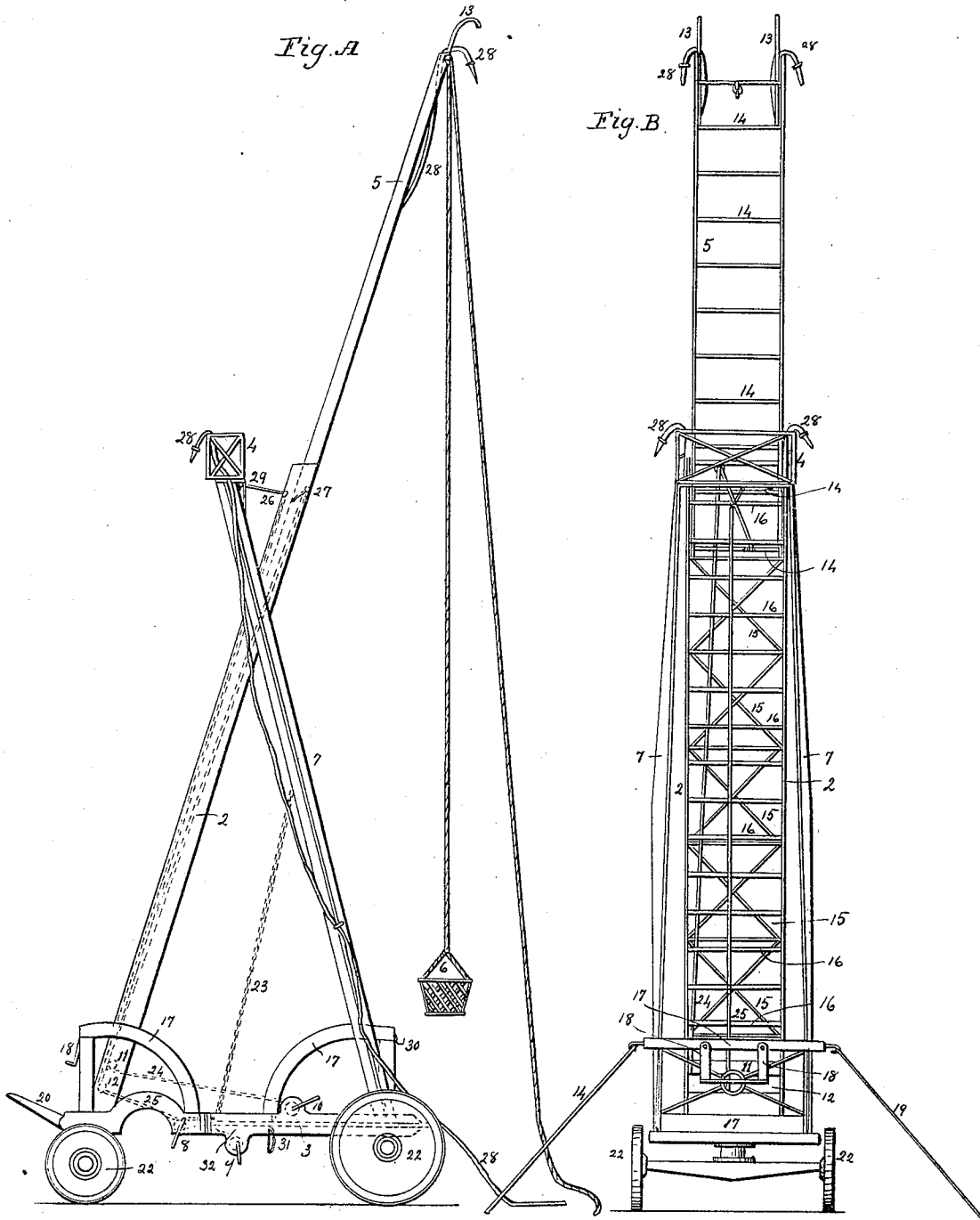


J. VAN AMRINGE.
Fire Escape.

2 Sheets—Sheet 1.

No. 14,891.

Patented May 13, 1856.



UNITED STATES PATENT OFFICE.

JOHN VAN AMRINGE, OF CINCINNATI, OHIO.

FIRE AND ESCAPE LADDER.

Specification of Letters Patent No. 14,891, dated May 13, 1856.

To all whom it may concern:

Be it known that I, JOHN VAN AMRINGE, of the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in what I term a "Fire and Escape Ladder"; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, forming part of this specification, and to the figures of reference marked thereon.

Similar figures refer to corresponding parts of the improvement.

In former methods of using ladders at fires for elevating hose, and saving property, the labor was severe, and it required considerable time to bring them into operation, and was attended with danger and inconvenience owing to falling timbers and the giving way of walls.

The nature of my invention consists in using means for finding ready access to fires for extinguishing them, without danger, and with comparatively small labor or loss of time, and also an arrangement for saving the lives of persons in the upper parts of buildings when no other means of egress can be had.

My improvement comprises a peculiar arrangement and combination of ladders, the lower ends of which rest upon a frame work supported on wheels for the purpose of moving it from place to place as occasion may require. The lower ends of the ladders are fitted on to shafts running through the frame from side to side, and which work freely in their bearings, the object of which is to render the ladders adjustable at their tops to any desired point, by means of cranks rollers and ropes, so placed and operated as to effect this result.

The advantages accruing from the use of my improved fire ladder are several. The labor of elevating the hose formerly so difficult and tedious, is accomplished in my method with rapidity and ease, and instead of the delay and confusion in bringing and hoisting ordinary ladders, the apparatus I employ is almost immediately brought into operation as soon as the fire is reached. It is attended with no delay or confusion, requires less labor to work it, is less dangerous, and can be so adjusted as to operate on any portion of a building in flames, in almost a moment's time. It is apparent that any means which will accom-

plish these results, would aid in saving much valuable property, and alleviation of distress, and combine such other advantages as to be of great value in other respects.

To enable others skilled in the art to make and use my improvement, I will proceed to describe its construction and operation by referring direct to the accompanying drawings.

Figure A, is a side elevation of the improved fire ladder, showing the hose lashed to the two main ladders, also the basket provided as a means of escape, and shows by dotted lines, the ropes, and pulleys, used for hoisting the ladders to their required position. Fig. B, represents an end elevation of the improvement, showing its construction more in detail. Fig. C, is a side view of the improved ladder, showing the means used for extending the base of the carriage or frame work, it being divided into two sections and made to slide on guiding shafts. It is here represented in the position it is placed in when not in use, and being elongated it is prevented from being top-heavy when taken from place to place.

17, 17, is the base or frame-work. 22, 22, are the wheels supporting the same. 20, is the tongue.

7 is a ladder brace supporting the platform 4.

2, is a ladder; containing another one (5,) within it. Both of the main ladders 2 and 7 work at their bases on shafts placed in the frame work, and extending from side to side.

32, and 3, are pulleys or rollers, in the frame work, operated by the cranks.

9, and 10, for elevating the ladders 2, 7, and 5, by means of ropes 24, 25, pulleys 11, and 12 and rings 26 and 27, secured to the ladders.

28, 28, are hose, shown in the different views, which are lashed to the ladders before hoisting them.

18, is a seat or platform for the driver to occupy.

30 are resting hooks for carrying the hoisting basket on, one of which is fastened on each side of the rear portion of the frame or body.

15, 15, 15, are braces and 16 the rounds for the ladder 2.

14, 14, are rounds to the ladder 5.

13, 13, are hooks for resting and steadying the top of the ladder.

6, is a basket, attached to a rope which runs over a pulley or through a ring fastened at the top of the ladder, for lowering valuables from buildings in flames, or for saving life when in danger.

The operation of the improvement is as follows. The apparatus is taken from the house in which it is sheltered, at which time it is in the position as represented in Fig. C, and is drawn by horses or men to the fire. After the location is selected for operating, the two sections of the frame or body are brought together by means of crank 8 and pulley 1, winding up the connecting rope thus sliding the guiding shafts back into the rear section of the frame. The steady- ing poles 19, are then thrown out to keep the base firm. The crank 9, and pulley 32, are then turned, which winds the rope around the pulley 32, and the rope being secured at the top by the ring 29 and running through ring 26 and over roller 12, draws up the ladder brace 7, and the chain 23 keeps it at the proper height, until ladder 2 is hoisted in the same manner; the crank 9, is then secured by a catch-rope 31. The crank 10, and pulley 3, is operated in like man-

ner to draw up the ladder 5, by rope 24, working over the roller 11, the upper end of which rope is secured firmly to a ring in ladder 5, and passes through a ring in ladder 2, after which the crank 10 is secured by a catch-rope.

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

1. The combination of the ladder 2, frame 7, and guy chains 23, as attached to the frame work 17, 17, and these in combination with the pulley 3 and rope 24, or their equivalents, for elevating the ladder and frame, substantially for the purposes set forth in the foregoing specifications.

2. I also claim the arrangement of the guiding shafts 21 arranged with the two sections of the framing 17, and the windlass 1, and the cord connected therewith and to one of said sections 17, for drawing the two sections apart and together for purposes mentioned in the foregoing specifications.

JOHN VAN AMRINGE.

Witnesses:

MARTIN BENSON,
L. W. SMITH.