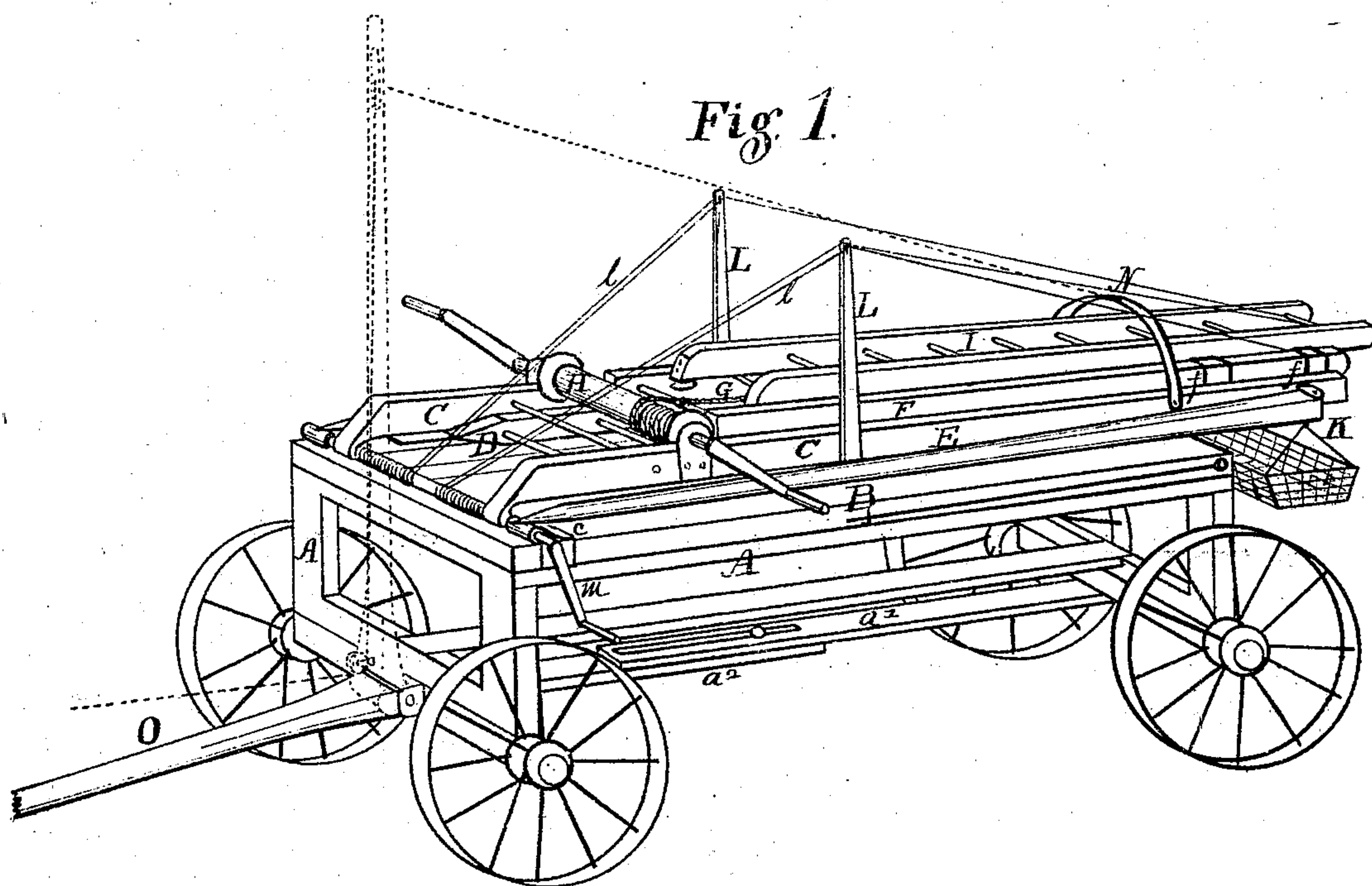


W. B. CRANE.
FIREMEN'S LADDER.

No. 173,910.

Patented Feb. 22, 1876.



Witnesses.

Geo. H. Tibbitts
H. A. Tibbitts

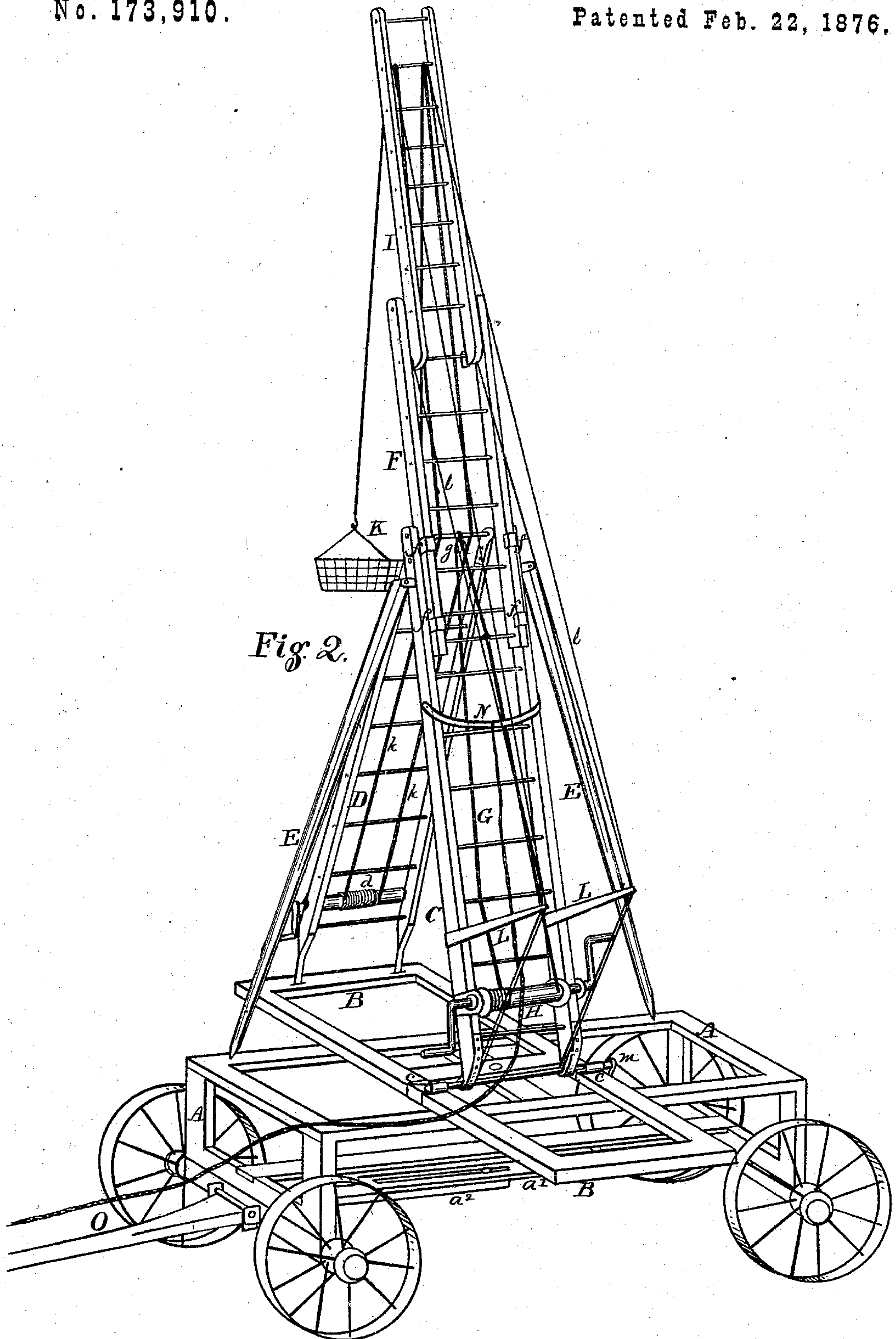
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A. B. Tibbitts

Inventor

W. B. Crane.

UNITED STATES PATENT OFFICE.

WILLIAM B. CRANE, OF CLEVELAND, OHIO, ASSIGNOR OF ONE-HALF HIS
RIGHT TO SAMUEL H. KIRBY, OF SAME PLACE.

IMPROVEMENT IN FIREMEN'S LADDERS.

Specification forming part of Letters Patent No. 173,910, dated February 22, 1876; application filed
September 1, 1875.

To all whom it may concern :

Be it known that I, WILLIAM B. CRANE, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a Firemen's Ladder, of which the following is a specification :

This invention relates to a firemen's ladder, arranged to be transported and elevated on a track, the object being to supply a safe and convenient means of reaching upper stories of buildings, and affording an easy escape from burning buildings, all combined, arranged, and operating substantially as hereinafter described and claimed.

To enable others to fully understand my invention, I will proceed to describe the same in detail with the aid of the accompanying drawings, in which—

Figure 1, Sheet 1, is a perspective view of my aforesaid truck and ladders, folded for transportation. Fig. 2, Sheet 2, is a perspective view of the same, showing the ladders elevated and extended.

A, Figs. 1 and 2, represents a strong frame, forming a bed, upon which the ladders rest and operate. Under each end of the bed is placed an axle-tree, each being fixed to turn at the center on a bolt, the said axle-trees being connected by a jointed reach in such a manner that the two axles are turned simultaneously in opposite directions to enable the truck to easily turn corners. The said reach consists of two parts, $a^1 a^2$, the first having a slot in which a pin, having a button on the other part, plays. On the top of the bed is placed a turn-table, B, arranged to turn at the center on a center-pin, the object of which is to enable the ladder to be turned on the truck as may be required. C is the main ladder, pivoted at its front or lower end to the turn-table B by blocks $c c$, at each side, arranged to slide on the side rails of said table—this is to enable the ladders to be placed in a more perpendicular position when extended. The ladder C is connected at the top round with another ladder, D, by a joint, which, when elevated, forms a support for said ladder C, as shown in Fig. 2, the foot of said ladder D resting in sockets in the end of the turn-table. The ladders C and D are also supported by struts E E at each side, they being attached to the top of ladder C by universal joints, whereby they may be turned to set in the required position. To ladder C is attached a

third ladder, F, which slides in guide-sockets $f f$, and which is raised or lowered by a rope, G, passing through a pulley, g , at the top round of ladder C, and is attached to lower round of ladder F, the ends of which rope are secured to a windlass, H, on the lower front side of ladder C—this forms the up and down haul for said ladder F. A fourth ladder, I, may be attached by hooks to the top round of ladder F, when necessary to elevate hose to extraordinary heights, but the two ladders C and F will elevate sufficiently high for all ordinary purposes. To ladder D is also arranged a windlass, d , having ropes $k k$ reaching up and over the top round of the upper ladder, for raising and lowering a basket, K, to be used as an escape. To the front side of ladder C are attached two arms, L L, over which, from the bottom to the top of the ladders, is placed ropes $l l$, for strengthening them. The lower ends of said ropes are attached to the joint-rod at the foot of ladder C, which rod having a crank, m , on one end, may be used for a windlass for the purpose of winding said ropes on. On the ladder C is placed a bail, N, having a rope attached, and passing through a sheave in the end of the tongue O, and is employed for raising the ladders to an upright position, in the first place, in the act of elevating the same, which is as follows :

When the ladder is to be raised, the loose ladder is removed, the tongue O thrown up in the position seen in dotted lines, Fig. 1, when the horses may be attached to the end of rope from the bail N, and by drawing thereon the ladders C D are raised, and the ladder D swings back and may be fixed in the position shown in Fig. 2, and the struts E E placed in position; then the ladder F may be extended by the windlass, and the lower end of ladder C be pushed inward by moving the slide-blocks $c c$, and, if necessary, the whole may be turned around by turning the turn-table, as seen in Fig. 2.

Having described my invention, I claim as follows :

The ladders C, D, and F, the struts E E, windlass H, rope G, all constructed and combined to operate with the bed or frame A, substantially as described.

Witnesses :

W. B. CRANE.

ANDREW SQUIRE,

GEO. W. TIBBETTS.