(No Model.) 2 Sheets—Sheet 1.

H. CREMAR.

FIREMAN'S EXTENSION LADDER.

No. 342,685. Patented May 25, 1886.

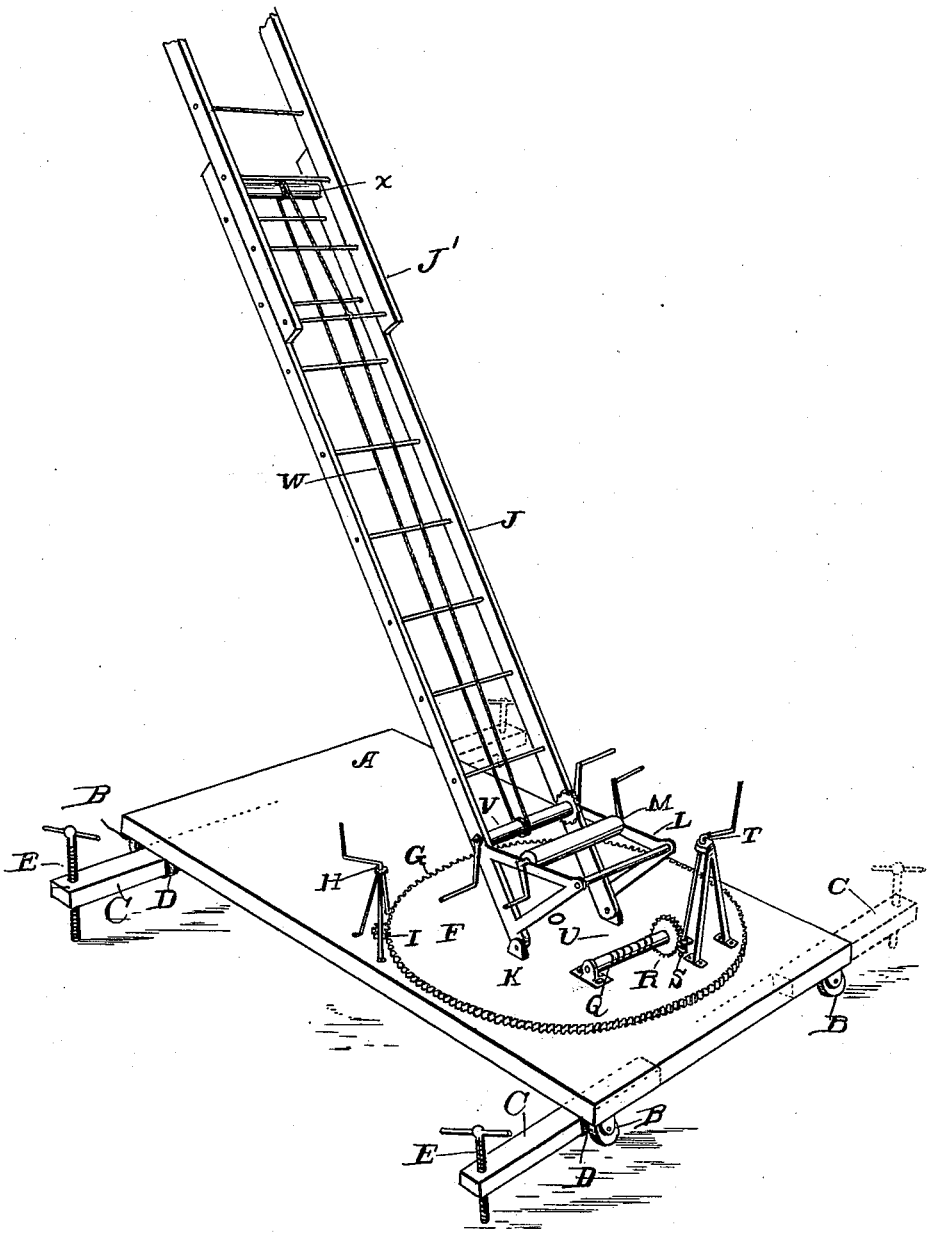

Fig. 1.

WITNESSES:

E. D. Zerbe
D. McKillop.

INVENTOR:

Henry Cremar
By E. D. Zerbe
Attorney.

(No Model.) 2 Sheets—Sheet 2.

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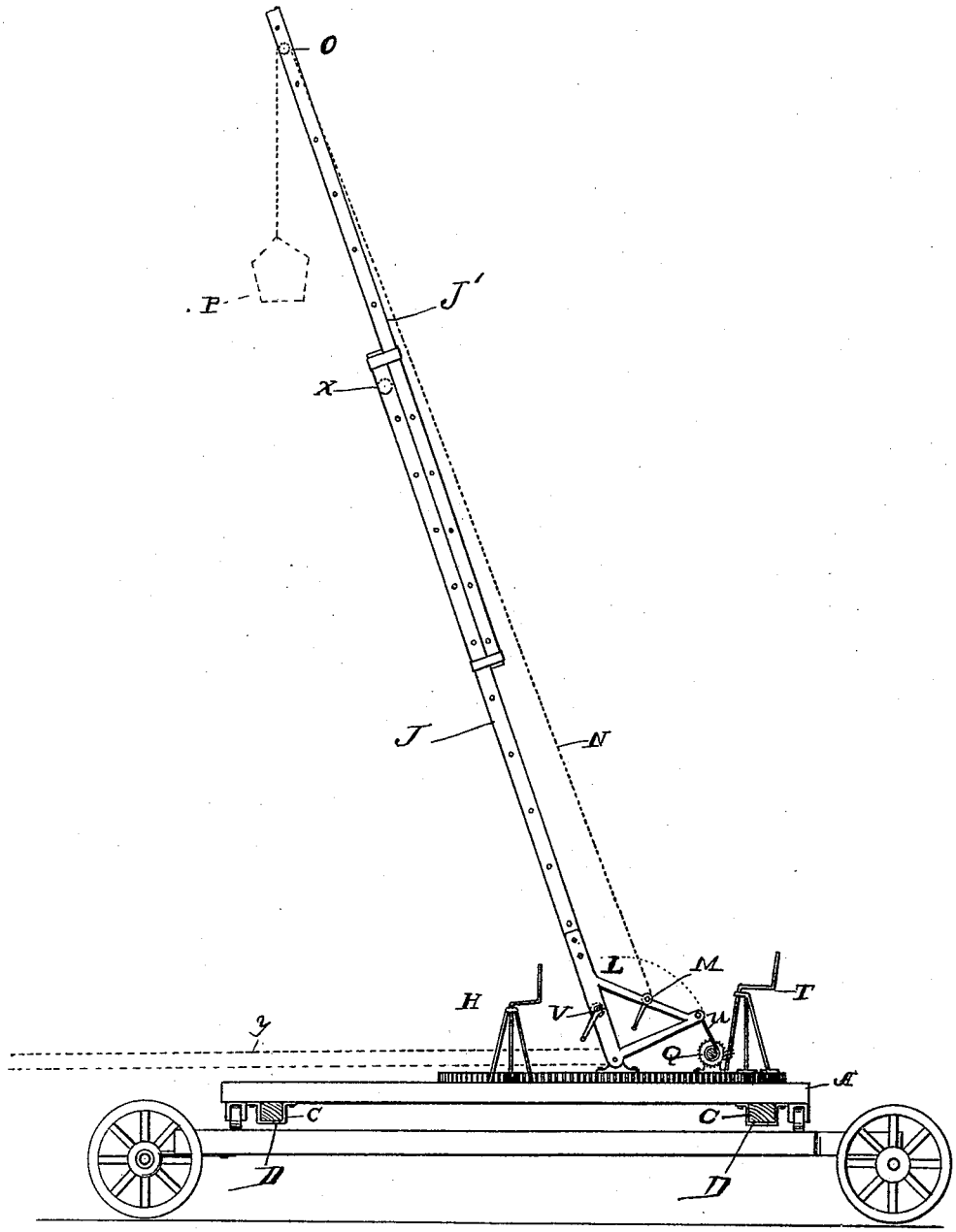

Fig. 2.

WITNESSES:

C. D. Zeltz.

Augustus McKillop.

INVENTOR:

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Attorney.

UNITED STATES PATENT OFFICE.

HENRY CREMAR, OF NEWPORT, KENTUCKY.

FIREMAN'S EXTENSION-LADDER.

SPECIFICATION forming part of Letters Patent No. 342,685, dated May 25, 1886.

Application filed August 28, 1885. Serial No. 175,553. (No model.)

To all whom it may concern:

Be it known that I, HENRY CREMAR, of Newport, in the county of Campbell and State of Kentucky, have invented a new and useful Improvement in Firemen's Extension-Ladders, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a perspective view of my improved fireman's extension-ladder, and Fig. 2 a side view of the same.

This invention represents an improvement in fireman's ladders, having for its object, first, its disposition upon the sidewalk in such a position that it may be raised without coming in contact with telegraph or telephone wires; and, second, to be raised with the utmost dispatch and swung around into any desired position, all as will now be more fully set out and explained, reference being had to the accompanying drawings.

In the accompanying drawings, A represents an ordinary platform, having underneath casters or rollers B, so disposed in connection with the truck to carry the device that the said truck may be driven up alongside the pavement, when the platform may be rolled off upon the sidewalk. At each end and beneath this platform laterally-adjustable arms C are provided, and are so disposed by means of keepers D that they may be run out from the said platform, and are provided with vertical sustaining and retaining screws E at their ends, and are designed to increase the breadth and firmness of the fulcrum, base, or support of the ladder. On this fulcrum A, I provide a suitable turn-table, F, the periphery of which has a spur-gearing, G. A vertical crank-shaft, H, having a pinion, I, at its lower end, is designed to engage with the spur G of the turn-table F, so that it may be rotated as desired. Centrally upon this turn-table I provide an extension-ladder, J, formed of the sections J′ and J″, commonly used for this purpose, hinged to convenient lugs, K, formed integral with the said turn-table. Forwardly from this ladder J, and securely connected thereto, I provide a frame, L, having at its upper part a crank-shaft, M, to which a rope, N, may be secured, designed to extend up and over a pulley, O, at the upper end of the ladders, to which a bucket or stage, P, may be secured, to be used for lowering people or merchandise, as found necessary. A horizontal drum, Q, journaled beneath the forward end of the frame L, is provided at one end with a spur-wheel, R, and engaging therewith a worm-gearing, S, on the vertical crank-shaft T. The rotation of the vertical crank shaft T, having thereon the worm-gearing, in connection with the spur-wheel of the horizontal drum carrying the rope connecting with the forward part of the frame, causes the ladder to be elevated to any desired angle, after which it may be swung around into any position by means of the vertical crank-shaft H, in connection with the spur-gearing engaging with the turn-table. The drum Q is connected with the forward end of the frame L by means of a cord, U. Between the lower ends of the section J′, I provide a horizontal crank-shaft, V, provided with an endless rope, W, the upper end extending over a pulley, X, at the upper end of the section J′. One part of the said endless rope being connected with the lower end of the upper section, J′, the rotation of the said crank-shaft will raise or lower the upper section.

In using this device the truck containing the same is driven up alongside the curbing, when it is run off upon the pavement and the arms C run out, after which the screws E are run down, so as to form a large area of support and leverage for the base A. The ladder J is then in a horizontal position, as shown by the dotted lines Y, Fig. 2.

By operating the crank-shaft T, the worm-gearing S, in connection with the spur-wheel of the horizontal drum Q, raises the ladder J to any desired angle. Then by rotating the other vertical crank-shaft H, engaging with the periphery of the turn-table F, the ladder may be swung around into any desired position parallel with or at an angle against the building, and if it is necessary to extend the ladder this may be done by means of a drum and crank-shaft, V, connected with the lower end of the upper section, J″.

What I claim as new is—

The combination, in a fireman's extension-ladder, of the turn-table F, journaled upon the platform A, provided with casters and lateral extension-arms having at their outer ends vertical set-screws E, the said turn-table provided with a spur-gearing on its periphery

and a pinion on a vertical crank-shaft, H, so that the turn-table may be rotated by operating this said crank-shaft, and the extension-ladder hinged to the turn-table having a forwardly-projecting frame, L, connecting by rope or chain with a drum, worm-gear, and vertical crank-shaft for operating the same, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 5th day of August, 1885, in the presence of witnesses.

HENRY CREMAR.

Witnesses:
JOHN GALVIN,
JOHN CALLAHAN.