(No Model.)

# H. F. & L. POKORNY.

## FIRE ESCAPE.

No. 533,667. Patented Feb. 5, 1895.

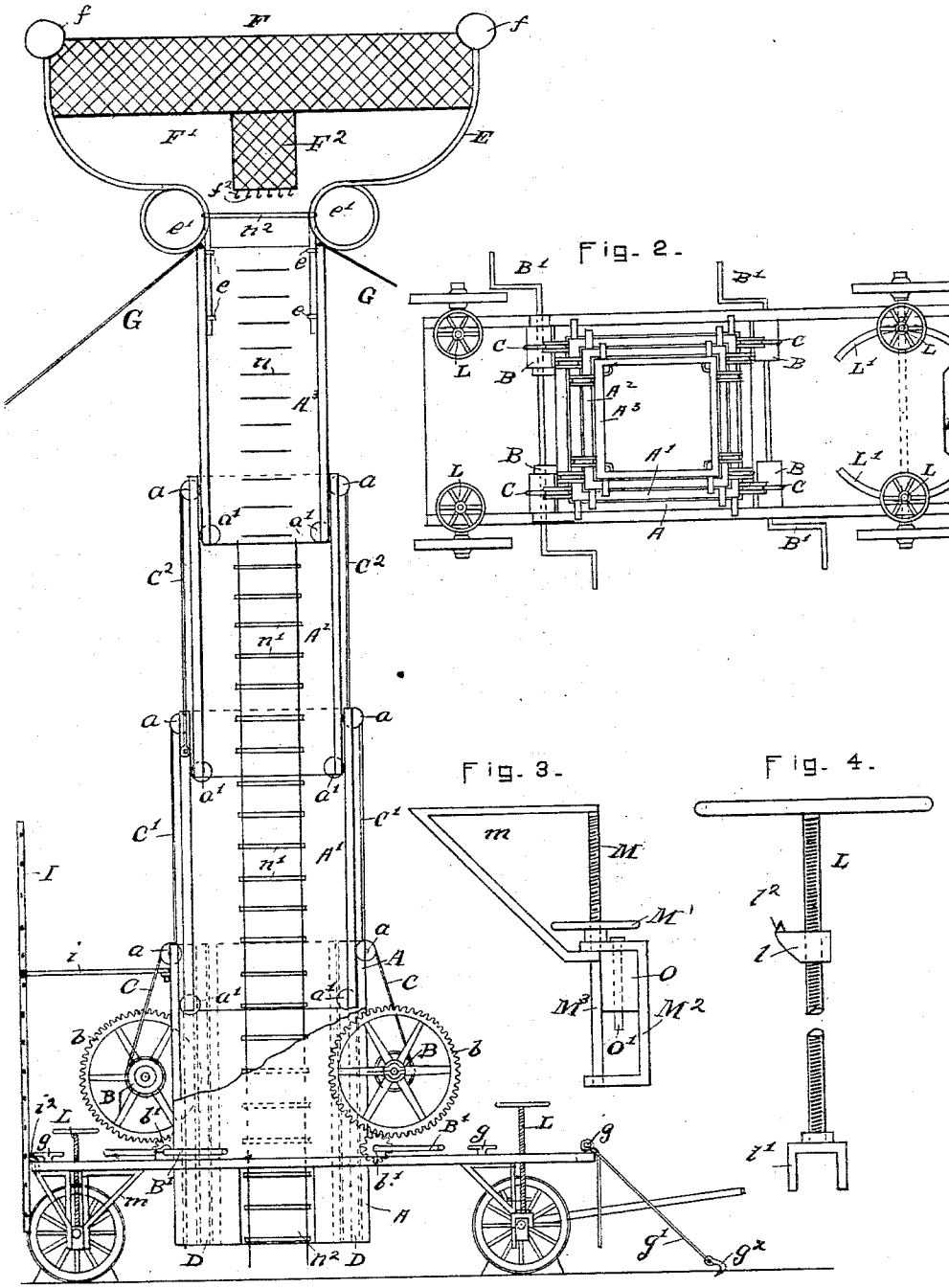

Fig. 1.



Fig. 2.



Fig. 3.



Fig. 4.

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# UNITED STATES PATENT OFFICE.

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## FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 533,667, dated February 5, 1895.

Application filed September 26, 1894. Serial No. 524,154. (No model.)

*To all whom it may concern:*

Be it known that we, HUGH F. POKORNY and LUCY POKORNY, citizens of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Fire-Escapes; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to fire escapes and consists of a telescopic tower which is mounted on trucks and is provided with means for raising or extending it, and with peculiar devices for adjusting the level of the truck platform and means attached to the top of the telescopic tower for catching people.

In the drawings, Figure 1 is an elevation, the tower being mainly sectional. Fig. 2 is a plan; Fig. 3, the device for pivoting the platform to the front axle, and Fig. 4 one of the front elevating screws.

A number of sections of tubes, A, A′, $A^2$ and $A^3$, each, except the first just smaller than the last so that it fits snugly within it, are mounted upon a truck or wagon. These tubes may be either square, round or any other convenient or desirable section. Instead of making these of closed tubes as shown, the sections might be made of an open construction, using only bars, angle irons, &c., braced together. Their position when the apparatus is not in use is shown by the dotted lines at D. At their lower ends they all, except the first or largest one, have a set of either eight or four small wheels $a'$, set in notches so that their outer sides will bear against the inner surface of the tube next larger. Which number is used is immaterial. If eight are used, they will be at the corners as shown in Fig. 2, while if four are used, they will be at the center of the sides. All of the sections except the upper, also have pulleys $a$, which are grooved in the center to carry the cables C, C′ and $C^2$, and also to bear against the outer surface of the section next smaller. These two sets of rollers or wheels keep the sections steady and the whole straight without undue friction. These sections are raised as follows: A windlass B, B, upon each side winds up the wire cables C, which are attached to the lower end of the second section A′, thus elevating it within the section A. The cable C′, which is attached to the upper end of section A, and to the lower end of section $A^2$, passing over pulley $a$, on section A′, raises section $A^2$. In the same way cable $C^2$ raises section $A^3$. In the same way all the different sections whatever their number are raised. The cables from the windlass run only to the second section and its elevation causes the others to go up.

Within the upper end of the upper sections, at the corners of it is square, are four staples or eyes $e$, in which are inserted one end of the curved net-supporting arms E. These are made of spring steel and have one or more coils $e'$ to increase the spring action and have their upper ends extending outward and support a net or hammock F, to catch without injury any person who may jump into it from above.

The bottom F′ would probably be made of coiled wire similar to a woven wire mattress and the sides of netted wire. Upon the upper ends of the rods E are placed cushions $f$, to prevent injury to any person striking them. These sections are to be made of a height which will permit of their passing under the street railway and other wires of a city, and the number of sections as great as may be necessary to obtain the required elevation.

The wagon platform is adjustable to bring it to a level by means of the screws L, placed at each of the four corners. The rear screws pass through nuts in the wagon platform and bear upon the axle. The axle is held from movement sidewise by the brackets $m$, on the under side of the platform. At the front end a similar device is used except that the nut is detached from the platform and engages its under side by the spur $l^2$. Two circular grooves L′ in the platform permit the front axle to be placed at an angle with the platform, the bar L, passing through the slots L′. Each of these threaded bars has a hand wheel on the upper end to operate them by. The enlarged opening $L^2$, permits of removing the front screws. Attached to the platform at convenient points are the cleats $g$, to which may be attached ropes or cables $g'$, having dogs $g^2$, attached thereto which may be driven into anything conven-

ient for anchoring the wagon and preventing overturning when in use.

Upon the inside of the smaller or upper section is placed a ladder or series of steps $n$, and to the bottom of this section is attached the rope ladder $n'$, which is long enough to reach to the ground when the apparatus is raised. An opening $n^2$, is made in the bottom section large enough for a person to pass through. This ladder may be used by the parties who have been caught in the net by having a hole in the center of the bottom of the net which is covered by a movable section $F^2$, having hooks $f^2$ on one end which may be used to fasten it up to the bottom to close the hole. This may be removed and through it they will be enabled to reach the ladder $n$, and descend to the ground. It may be used also as an extension hose ladder; the hose being introduced at the bottom and carried up to the top by the firemen.

Guy ropes G, attached to the upper section extend sidewise to the ground and are used to steady the apparatus when it reaches considerable heights. A short ladder I, is removably attached to the rear of the wagon for the use of people in descending from the net. When it has been filled the apparatus will be lowered and the people can descend from it to the ground by means of this ladder.

The ladder is attached to the platform by means of the pins $i^2$, which fit in holes in the rear end, and is maintained in its upright position by means of the brace $i$, running to the upper end of the lower section. The front end of the platform is pivoted to the axle so that the axle can turn under it and yet be adjustable in height by the means shown in Fig. 3. This consists of a brace $m$, attached to the platform and having the front vertical member in the form of a screw threaded bar M, which bar is extended downwardly in $M^3$ but not threaded. A clevis $M^2$ made of a flat bar of iron fits over this bar both above and below the point of juncture of the three sides of the brace. This holds the axle, which is pivoted thereto by the pin O'. This clevis permits of the axle's rotation and its vertical adjustment as well. A hand wheel M', is threaded upon the upper threaded bar M, and regulates the height of the platform with reference to the axle.

The net or hammock F, and its supporting arms E, are only put in place when the apparatus is to be used to catch people in when they jump. When moving the apparatus from place to place, or if it is desired to use it as an extension hose ladder, they would not be necessary and would be omitted. The arms E, fit loosely in the staples $e$ so that they can be easily inserted or removed. By removing them when the device is moving on the streets, the total height of the apparatus is less and difficulty in passing under wires is much lessened. If it is desired some other form of device may be attached at the staples $e$, than a net as shown, as for instance a platform or some form of screen to further protect the firemen.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The combination in a fire escape and hose ladder of a truck, tubular telescopic sections mounted thereon and means for extending them, with a net and means for supporting it above the upper section consisting of spring arms attached at one end to the corners of the net and staples attached to the upper section for receiving the other ends of the spring arms, substantially as shown and described.

2. The combination in a fire escape of a truck, tubular telescopic sections mounted thereon, with means for extending them, of a net supported above the upper sections, an opening in the bottom of the net and means for closing it, with a ladder within the telescopic tubes, substantially as shown and described.

3. The combination with a fire escape and hose ladder of telescopic tubes and means for extending them and a truck for supporting the same, of means for leveling the truck platform, consisting of screw rods at each rear corner bearing upon the axle, two screw rods bearing upon the ends of the front axle, circular segments upon the front end of the truck platform and nuts upon the screw rods to engage the said segments, substantially as and for the purposes described.

4. In a fire escape and hose ladder, the combination with a truck and the extension sections mounted thereon, means for adjusting the front end of the truck platform in relation to the axle consisting of a rod, screw threaded upon its upper half and attached to the under side of the platform, a nut and hand wheel therefor upon this rod, a clevis considerably greater in depth than the depth of the axle and means for attaching it thereto, said clevis having holes in its ends for receiving the screw threaded rod, substantially as shown and described.

In testimony whereof we affix our signatures in presence of two witnesses.

HUGH F. POKORNY.
LUCY POKORNY.

Witnesses:
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