

(No Model.)

2 Sheets—Sheet 1.

C. BARTHOLOMEW.  
FIRE ESCAPE.

No. 528,284.

Patented Oct. 30, 1894.

Fig. 1.

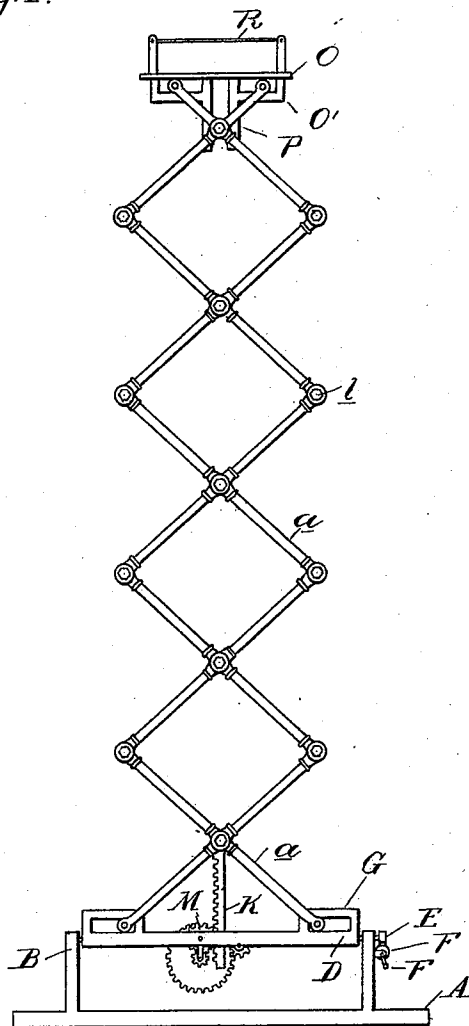


Fig. 1.

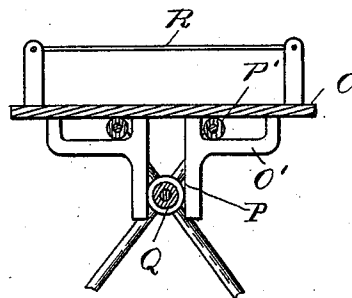
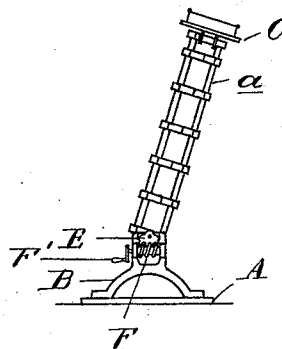


Fig. 2.



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Fig. 3.

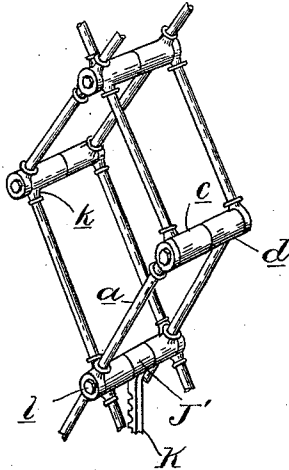


Fig. 5.

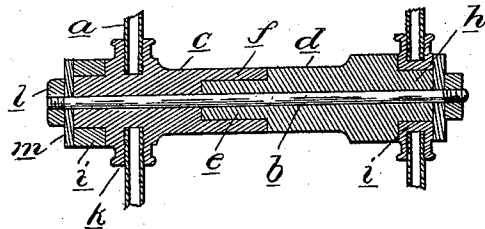


Fig. 6.

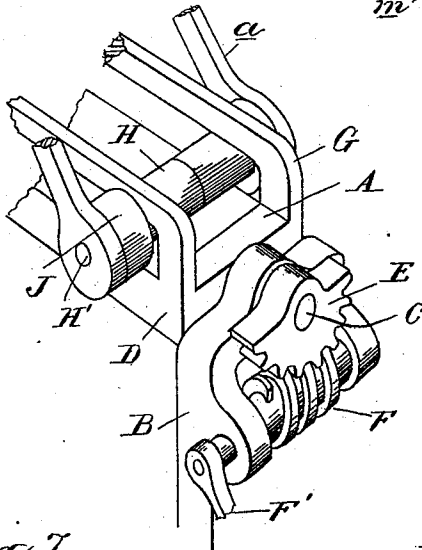
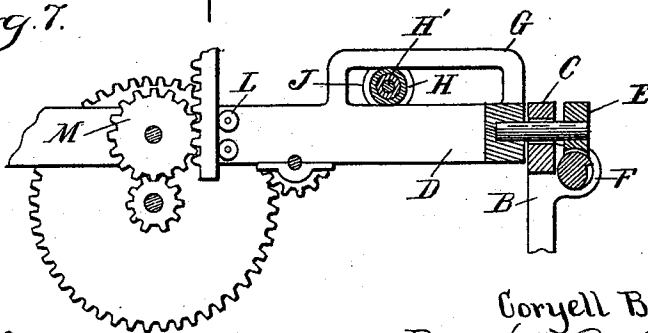


Fig. 7.



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# UNITED STATES PATENT OFFICE.

CORYELL BARTHOLOMEW, OF JACKSON, MICHIGAN.

## FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 528,284, dated October 30, 1894.

Application filed April 10, 1894. Serial No. 506,988. (No model.)

*To all whom it may concern:*

Be it known that I, CORYELL BARTHOLOMEW, a citizen of the United States, residing at Jackson, in the county of Jackson and State of Michigan, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention consists in the peculiar construction of a lazy tongs frame supported on a truck and adapted to be extended beside a building to any desired height, or lowered by separating or bringing together the lower arms of the bottom section.

The invention further consists in the peculiar construction of the support for such frame, whereby it may be rocked upon supporting trunnions so that its top may be caused to approach the building at any desired height.

The invention further consists in the peculiar construction of the hubs or joints between the various sections, all as more fully herein-after described.

Figure 1 is a side elevation of my improved fire escape showing it as extended. Fig. 2 is an end elevation showing the tower rocked to an inclined position. Fig. 3 is a perspective view of a section of the tower extended. Fig. 4 is a vertical section through the top platform. Fig. 5 is a vertical, central, longitudinal section through one of the central hubs. Fig. 6 is a detached perspective view of a portion of the frame showing the supporting trunnions and a device for rocking the tower. Fig. 7 is a vertical, central section through the supporting frame on the truck.

A is the frame of the truck of any desired construction.

B are standards thereon having bearings at the top in which are journaled the trunnions C which are connected to the rocking frame D. On the end of one of the trunnions is a gear segment E with which the worm F is adapted to engage this worm being journaled on one of the standards B and provided with an actuating crank handle F', so arranged that by turning the worm F, the segment E and frame D may be rocked at any desired angle to the supporting frame. The upper face of the frame D is provided

with longitudinal guide bearings G in which rollers H slidably engage. These rollers are journaled on a shaft H' which connects the lower end of the double lazy tongs tower frame. At each end the rollers are provided with heads J which bear against the side of the connecting bar G and prevent longitudinal movement of the rollers in the bearings. Journaled on the ends of these rollers are the lower ends of the levers a of the lower section of the lazy tongs frame, which levers I form of two parts, preferably tubular and connected into a common hub journaled on a central shaft b, as shown in Fig. 5. This hub is formed of the main hub sections c d, one section having a neck or nipple e and the other a sleeve f, in which the neck or nipple engages. These main hub sections extend from end to end of the shaft b and each is provided at its end with a reduced portion or journal bearing h upon which is journaled rings i.

The main hub sections and the rings are provided with interiorly screw threaded nipples k in which the lever sections a are engaged. On the end of the shaft I arrange a securing nut l and a washer m. This construction of hub gives great strength to the joints and when the tower is rocked into an inclined position prevents danger of bending or other damage to the shaft b as the strain is carried by the main hub sections which are made sufficiently strong to resist these strains, centrally. On the lower hub is journaled a ring J' to which is secured a rack bar K which works beside roller guides L on the rocking frame D and meshes with a suitable pinion M having suitable gear connection with an actuating crank by means of which the lower hub may be raised and lowered and the tower thus correspondingly extended or lowered as described.

O is a platform having the horizontal guide bearings O' on its under side, and a central vertical, guide bar P between these horizontal guides.

P' are rollers on the upper end of the upper lever sections working in the guide bearings O' and Q is a roller centrally of the upper hub section working in the vertical guide bearing P.

R is a suitable railing on the platform.

The parts being thus constructed their op-

eration is as follows: The truck being drawn in proximity to the building where it is desired to be used, the operator turning the crank N will raise the rack bar K which will raise the lower central hub or shaft correspondingly extending the lazy tongs and raise the platform. When the platform is at the desired height, the tower may be rocked by means of the crank F' acting through the segment E which is on one of the trunnions of the rocking frame as previously described. The tower may be lowered by the reverse operation.

What I claim as my invention is—

1. In a fire escape, the combination with the truck, of a frame journaled on the truck, guide bearings on the frame, a double lazy tongs tower having the lower ends of the bottom levers slidingly engaging in the guide bearings on the frame, a rack bar centrally pivoted to the hub of the lower section of the tower, and gearing on the frame engaging the rack bar, substantially as described.

2. In a fire escape, the combination of the truck, the frame D journaled on trunnions therein, the gear segment E on one of the trunnions, the worm F for rocking the same, the double lazy tongs tower having the lower end of the bottom levers slidingly engaging in longitudinal bearings on the frame D, the rack bar K pivoted to the hub of the lower section, and working in bearings in the frame D, and gearing on the frame D for raising and lowering said rack bar, substantially as described.

3. In a fire escape, the combination with the truck, of a frame journaled on the truck,

a double lazy tongs tower on the frame, a rack bar pivoted to the hub of the lower section of the tower, a pinion on the frame engaging the rack bar, and rollers journaled on the frame on opposite sides of the plane of the axis of the pinion and on the opposite side of the rack bar, substantially as described.

4. A fire-escape, comprising in combination a support, a double lazy tongs frame thereon, made up of sections connected together on a common shaft, the hub on such shaft comprising two interlocking main hub sections journaled on the shaft and extending from end to end, two upper and lower series of connecting bars connecting into such hubs, and rings at the ends of the hubs, journaled on reduced bearings thereon, to which the other series are connected, substantially as described.

5. In a fire escape, the combination of the rocking frame the double lazy tongs frame thereon having a platform at the top, of the hubs at the crossing point of the levers comprising a central shaft *b*, the main hub sections *c d*, having interlocking ends the journal bearings *h* formed at the ends thereof, the rings *i* journaled thereon, the lever sections engaging screw threaded nipples in sections *c d* and rings *i*, and the washers *m* and nuts *l* on the ends of the shaft, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CORYELL BARTHOLOMEW.

Witnesses:

STEPHEN H. CARROLL,  
JOHN HORNING.