(No Model.)

G. J. DECKER.

FIRE ESCAPE AND TOWER.

No. 539,672. Patented May 21, 1895.

fig. 7.

fig. 1.

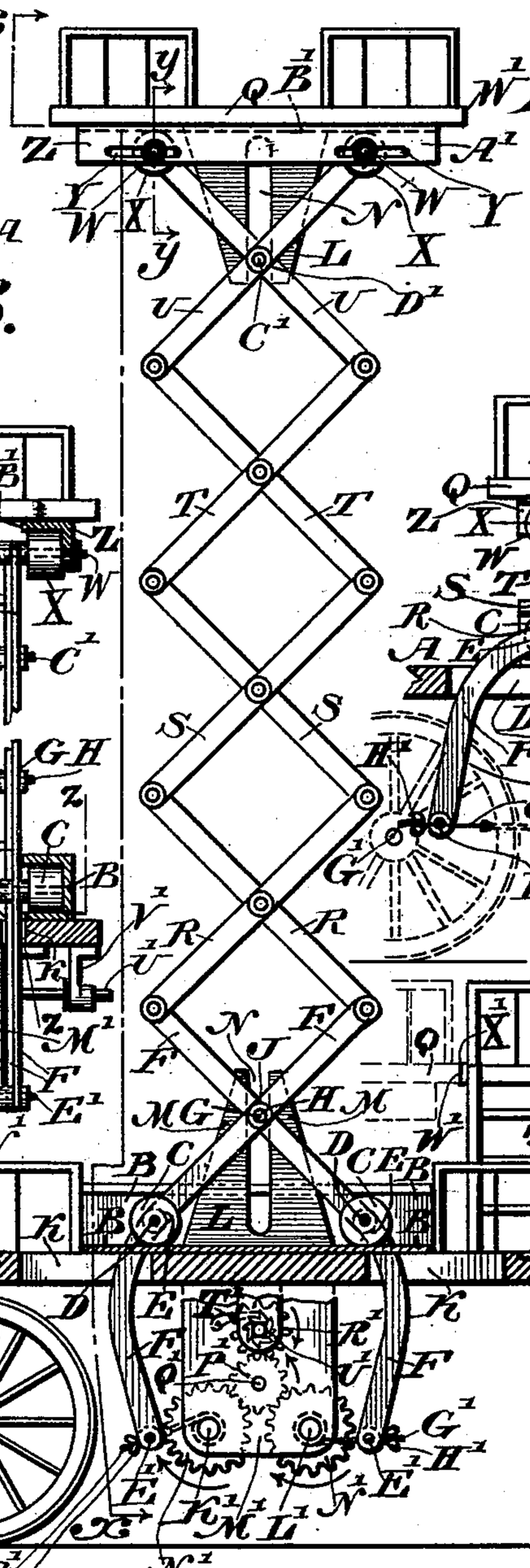


fig. 3.

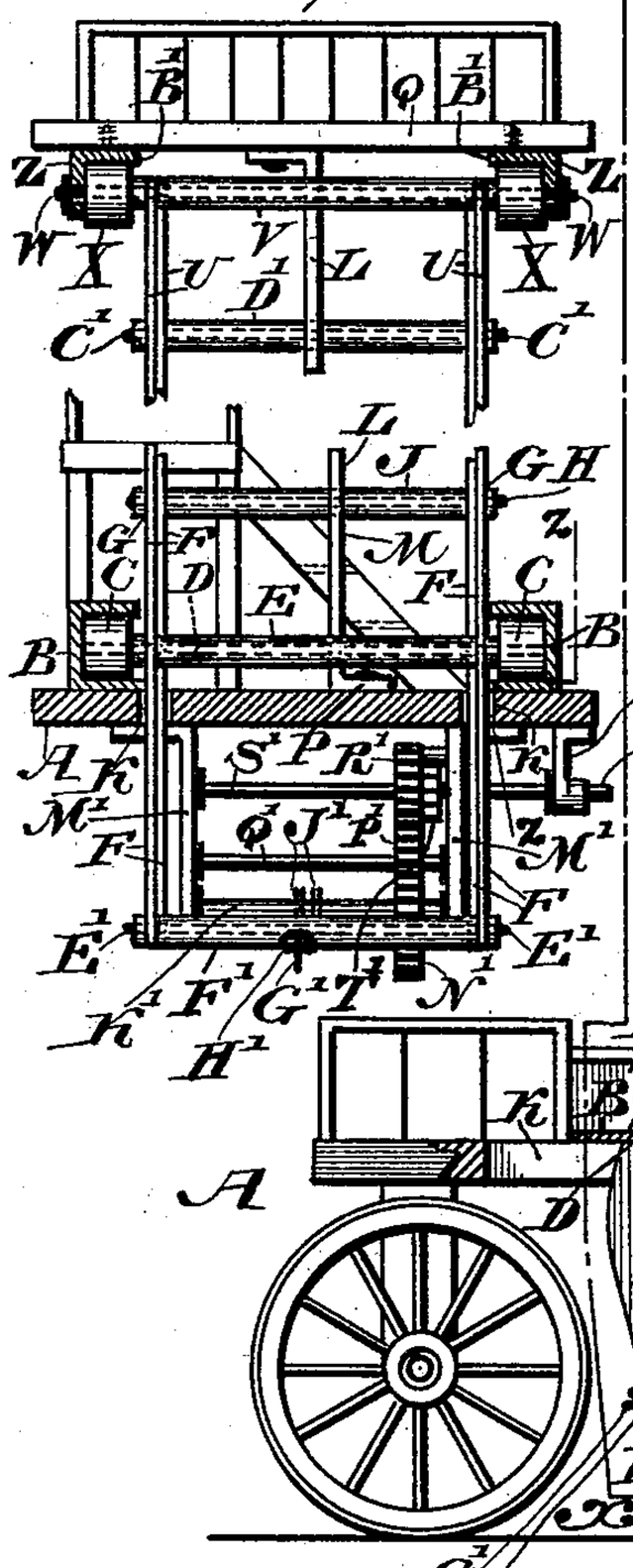


fig. 2.

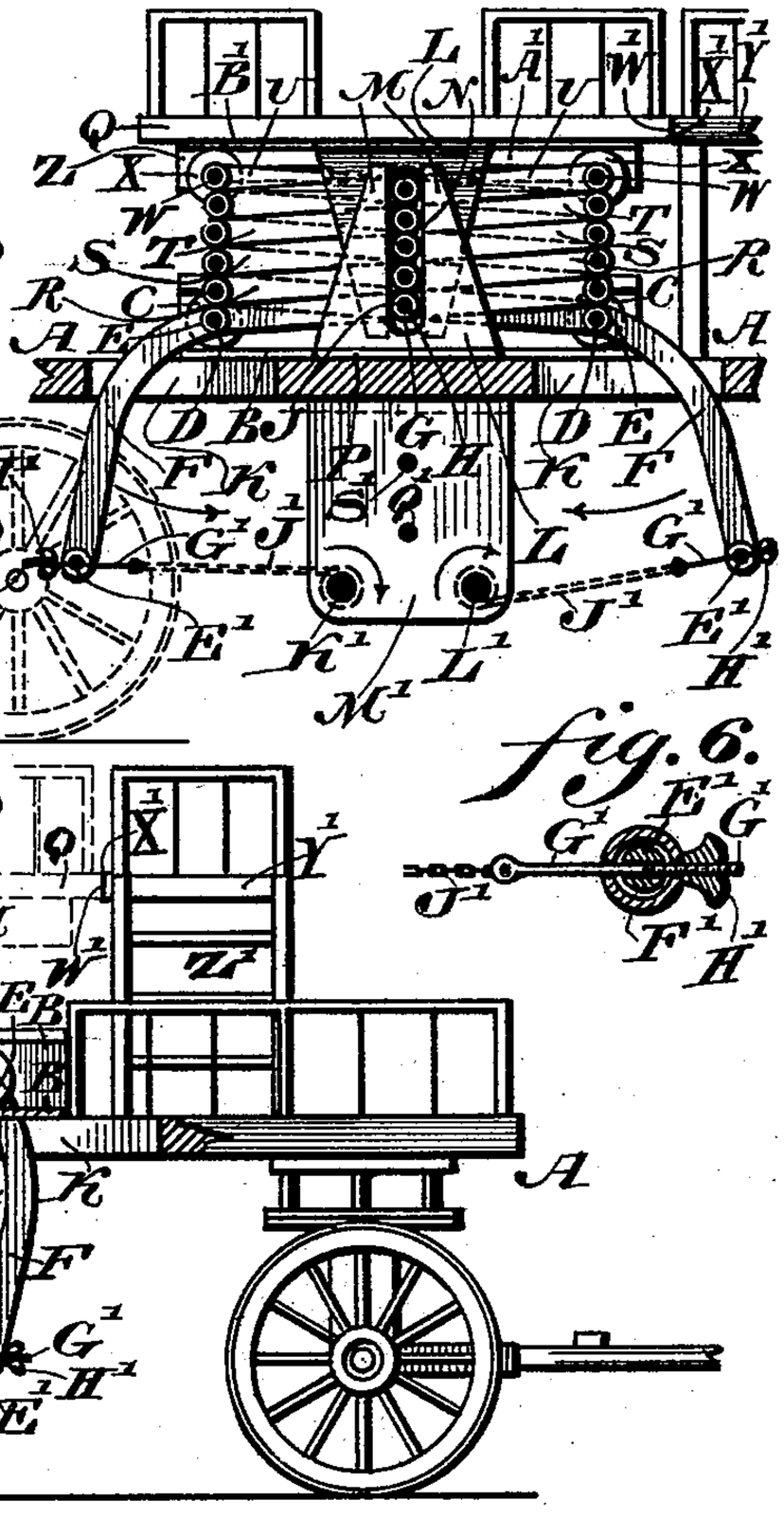


fig. 6.

fig. 5.

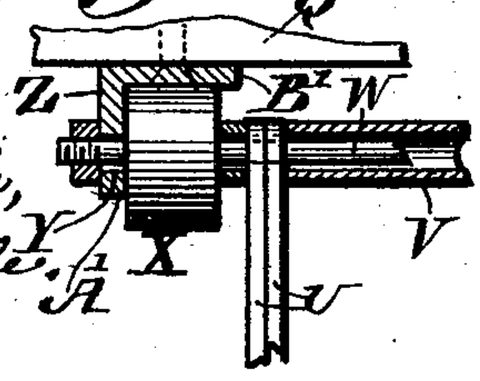
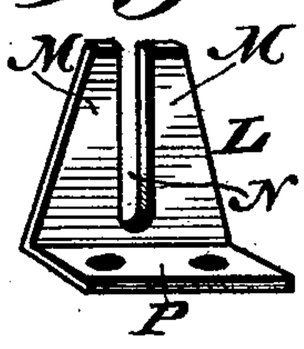


fig. 4.



Witnesses
L. Douville,
P. H. Nagle.

Inventor
Gabriel J. Decker.
By Johnson & Wiedersheim.
Attorney

UNITED STATES PATENT OFFICE.

GABRIEL J. DECKER, OF PHILADELPHIA, PENNSYLVANIA.

FIRE ESCAPE AND TOWER.

SPECIFICATION forming part of Letters Patent No. 539,672, dated May 21, 1895.

Application filed November 28, 1894. Serial No. 530,203. (No model.)

To all whom it may concern:

Be it known that I, GABRIEL J. DECKER, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Fire Escapes, Towers, &c., which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a novel construction of fire escapes, towers, &c., which can be readily and quickly thrown into operative position and there sustained, and which, when not in use, can be stowed into a very small compass, and readily transported to different points.

It further consists of novel features of construction all as will be hereinafter explained.

Figure 1 represents a side elevation, partly in section, on line *z z*, Fig. 3, of a fire-escape, &c., embodying my invention, the same being shown in operative position. Fig. 2 represents a similar view of the same in closed or inoperative position. Fig. 3 represents a section on line *x x*, Fig. 1. Fig. 4 represents a perspective view of guides hereinafter referred to. Fig. 5 represents a section on line *y y*, Fig. 1. Fig. 6 represents a detail to be hereinafter referred to. Fig. 7 represents a plan view of the upper and lower platforms.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a suitable wagon or truck, which is provided with the tracks B, B, each of which has a vertical web and horizontal flanges, as shown in the cross sectional view in Fig. 3, said tracks being arranged on opposite sides of the floor of said truck, and extending in the present instance longitudinally of the same.

C designates rollers which are four in number, and are arranged in pairs, and are supported in said track, each pair of rollers being mounted on an axle D, which is inclosed by a sleeve E, which extends between the said rollers, said sleeve and axle extending transversely to the length of the aforesaid truck.

F, F, designate the lower bars of a lazy tongs system, which are arranged in pairs on each side of the truck, said bars being pivoted together at G by means of a rod and sleeve H and J, the latter being suitably held together, as is best seen in Fig. 3.

K designates slots in the floor of the truck, through which pass the lower extremities of the said bars F, each pair of which latter are suitably attached at a point intermediate of their lower ends, and their junction at G to one of the axles D, a short collar being interposed between each pair of bars F and their adjacent rollers, so that as the lower ends of said bars F, which are slightly bent, as is best seen in Figs. 1 and 2, approach or recede from each other, the rollers C will be correspondingly moved, and the point G will be raised or lowered, as is evident.

L designates a guide which is shown detached in Fig. 4, and consists of the upright portion M having the slot N therein, and the base P by means of which it can be attached to any desired point, one of said guides being attached to the floor of the truck, so that the sleeve J will be guided in the slot N, while the other guide is attached to the under side of the platform Q.

R, S, T, and U designate bars, which in combination with the bars F constitute a lazy tongs system, which can be opened and closed, said bars crossing each other and being pivoted together at their ends and central portions, as is best seen in Figs. 1 and 2, the lower ends of the bars R being pivoted to the upper ends of the bars F, while the upper ends of the bars U are each attached to the axles W, as is best seen in Fig. 5, suitable sleeves V inclosing said axles, whose ends pass through the rollers X, and project through the slots Y of one of the flanges A′ of the tracks Z, the other flanges B′ of the same being bolted to the under side of the platform Q; the rollers X, X, being connected in pairs by the axles W, similar to the rollers C, and having the sleeves V between each pair of rolls, as will be understood from Fig. 5.

The upper pairs of bars U are pivoted together by means of the rod C′, which is inclosed by the sleeve D′, which latter abuts against the inner faces of the inner bars U, as seen in Fig. 3, the sleeve D′ being guided by means of the upper guide L, which is attached to the platform Q as has been stated.

It will be understood that all the bars of

the lazy tongs system are pivotally connected in the manner above described, with reference to the upper and lower portions, the same being positively held in position by means of the rods and sleeves, as is evident.

The lower extremities of the pairs of arms F are connected by means of the rods and sleeves E′ and F′, respectively, which extend transversely to the line of movement of the truck.

G′, G′, designate threaded stems which extend through the said sleeves and rods E′ and F′, as is best seen in Fig. 6, said stems having the thumb screws H′ engaging their threaded portions.

J′ designates chains or other connections having one end connected to the ends of each of the stems G′, their other ends being connected to the shafts K′ and L′ respectively, the latter being journaled in the hangers M′, which are suitably attached to the truck.

N′ designates gears mounted on the shafts K′ and L′, both of which gears mesh with a pinion P′ mounted on a shaft Q′, said pinion P′ meshing with and being actuated by the pinion R′, which is mounted on the shaft S′, the latter being provided with a ratchet and pawl T′ of the usual construction, one end of said shaft being extended and supported in a bracket V′, and having a head U′ which may be squared for the application of a wrench or crank handle thereto, all of the above shafts being journaled in the hangers M′.

The platform Q is of such length that when it is in its lowermost position, its edge W′ will be in proximity to the edge X′ of the stationary platform Y′, the latter being provided with the steps Z′.

The operation is as follows, assuming the parts to be in the position seen in Fig. 2: In order to elevate the platform Q into the position seen in Fig. 1, the pinion R′ is rotated in the direction of the arrow, which can be done by applying a wrench or crank handle to the squared portion U′ of the shaft S′, whereupon the lower ends of the arms F will be drawn toward each other, the movement of the gears, &c., being indicated by the arrows in Figs. 1 and 2. The rolls C will approach each other, and the platform will be elevated, as is evident, the friction being reduced to a minimum through the interposition of the rolls X and C. When it is desired to lower the platform Q, it is only necessary to release the pawl of the ratchet mechanism T, whereupon the platform will descend by reason of its own weight and the parts will assume the position seen in Fig. 2.

It will be seen that when the apparatus is in closed position, the two platforms are substantially in contact with each other, and on the same level, and it will also be noted that the upper and lower guides L are preferably so located with respect to each other, that they serve to a certain extent to lock the parts, and to prevent any lateral movement of the same when the platform Q is in its lowest position.

Should there be any slack in the connections J′, or adjustment needed of the same, it can be accomplished by means of the thumb screws H′, as will be understood from Fig. 6, the height to which the upper platform is to be elevated being thus readily adjusted.

It will also be evident that various changes may be made by the skilled mechanic, which will come within the scope of my invention, and I do not therefore desire to be restricted to the exact construction I have herein shown and described.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A fire escape consisting of a floor having slots therein, a track secured to said floor, two systems of lazy tongs having connecting cross rods with sleeves thereon, a platform connected with the upper end of said systems of lazy tongs, rollers on the lower members of said lazy tongs, held in said tracks, rotatable drums, threaded stems passing through said cross rods and sleeves, thumb nuts on said threaded ends, and chains connected with said drums and stems, said parts being combined substantially as described.

2. In a fire escape, the upper platform Q, the track Z secured to the under side of said platform and having the depending flanges A′ with slots therein, two systems of lazy tongs having at their upper ends the bars U with connecting axles W, the sleeves V inclosing said axles, the rod C′ pivotally connecting the upper pair of bars U of each system of lazy tongs, the sleeve D′ inclosing said rod C′ and abutting against the inner faces of the inner bars U, the slotted guide L connected with said platform, the rollers X mounted on said axles which pass through the slots in said flanges A′, and mechanism for operating said systems of lazy tongs, said parts being combined substantially as described.

3. In a fire escape, &c. a lazy tongs system comprising two sets of bars pivoted to each other, and mounted on suitable tracks, a platform attached to the upper portion of said lazy tongs system, and rods and sleeves connecting their lower extremities, threaded stems passing through said rods and sleeves, and having thumb screws engaging the same, connections from said stems to shafts suitably journaled, and means for actuating the latter, substantially as described.

GABRIEL J. DECKER.

Witnesses:
JOHN A. WIEDERSHEIM,
A. P. JENNINGS.