(No Model.) 2 Sheets—Sheet 1.

W. M. S. GARRISON.

PORTABLE ELEVATOR.

No. 522,252. Patented July 3, 1894.

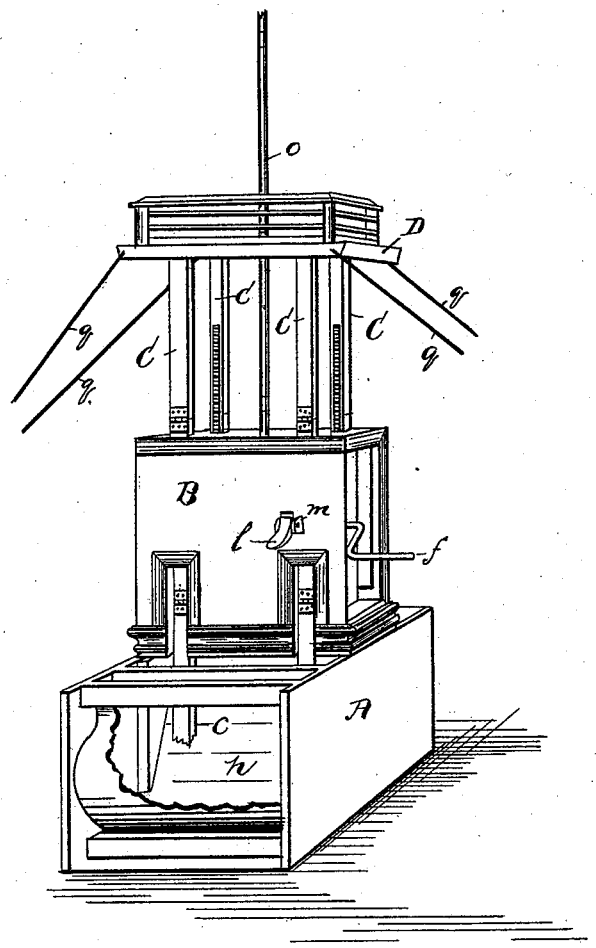
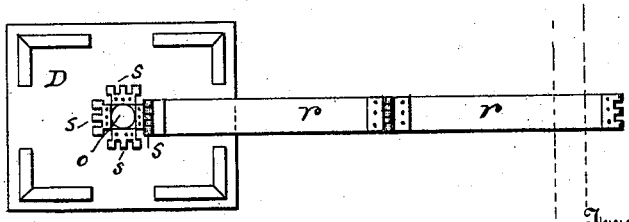


Fig. 1.

Fig. 2.



Witnesses:
Oscar A. Michel.
Jas. S. Baldwin

Inventor:
William M. S. Garrison,
By Drake & Co., Atty's.

(No Model.) 2 Sheets—Sheet 2.

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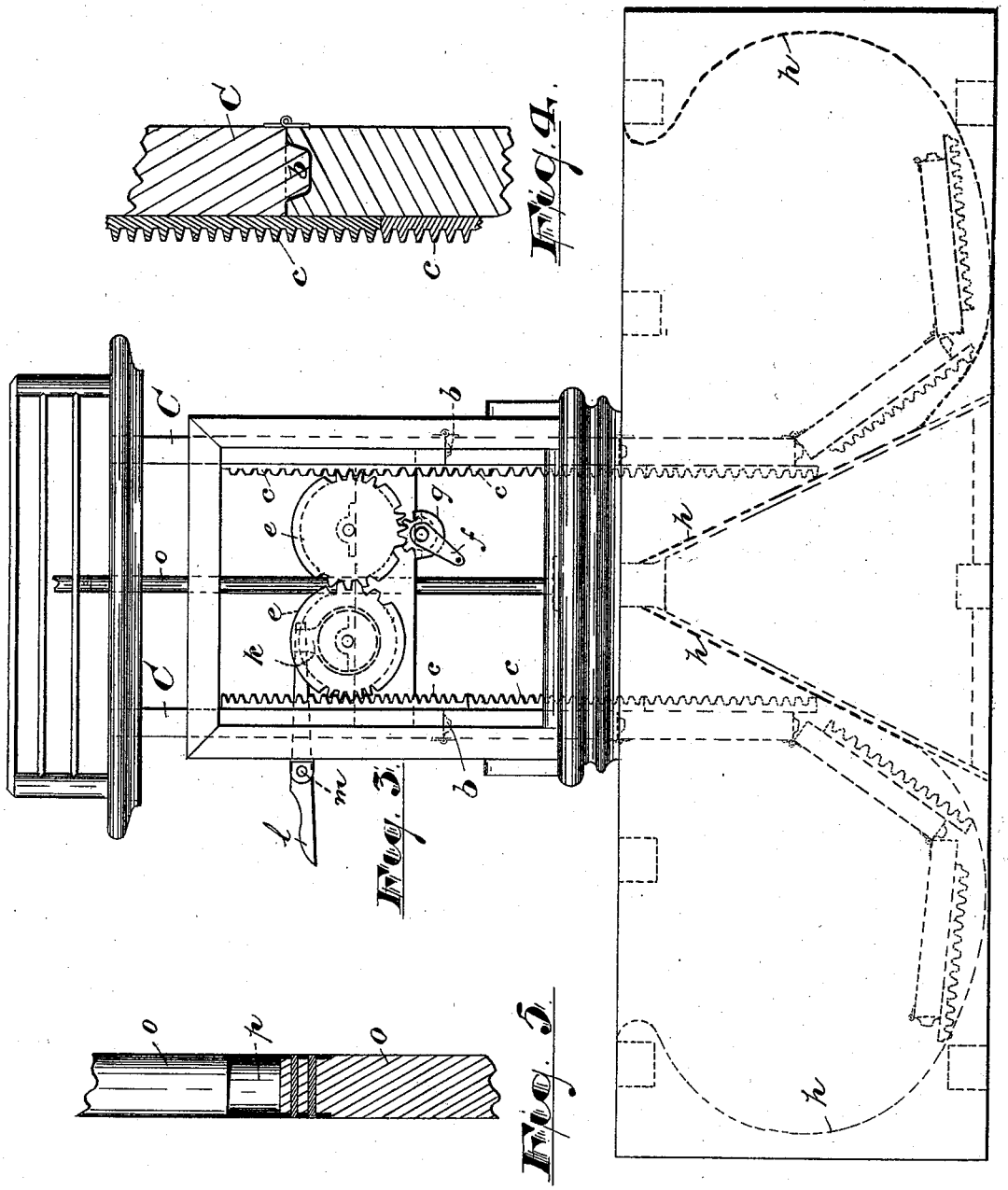

WITNESSES:

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INVENTOR:

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UNITED STATES PATENT OFFICE.

WILLIAM M. S. GARRISON, OF ELIZABETH, NEW JERSEY.

PORTABLE ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 522,252, dated July 3, 1894.

Application filed March 29, 1893. Serial No. 468,146. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. S. GARRISON, a citizen of the United States, residing at Elizabeth, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Portable Elevators; and I 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a portable elevator adapted for use in cases of fire, to rescue life and property from upper floors of burning buildings; also in attaching or repairing wires on poles or other elevated structures; also in bridge and house-building, and painting, &c.

The invention consists in the improved elevator and in the arrangement and combination of the several parts thereof, as herein set forth and finally pointed out in the claims.

Referring to the accompanying drawings, in which similar letters of reference indicate corresponding parts in each of the views where they occur, Figure 1, represents, in perspective, an elevator embodying my improvements and Fig. 2, is a plan of the top platform or cage and showing a folding bridge leading from said cage to the sill of a window or other structure. Fig. 3 is a side elevation of the elevator, and Figs. 4 and 5 are detail views.

In said drawings A, indicates a box or receptacle upon which the working parts of the elevator are mounted and in which certain portions of said working parts are retained when the elevator is collapsed and not in use. Said box is designed to be mounted upon a suitable truck, (not shown) by which the apparatus can be transported from place to place, as will be understood. Upon said box is mounted a frame B, in which work four vertically adjustable supports, C, upon the upper ends of which the platform or cage, D, of the elevator is mounted, as seen in Figs. 1 and 3. Said supports are made in sections which are firmly hinged together at their abutting ends and held in position or steadied by means of tenons and sockets, *b*, and work or slide in suitable grooves or ways formed in the sides of the frame B, as will be seen and understood upon reference to Figs. 1 and 3. Each of the supports is provided with a rack, *c*, made in sections, the ends of which overlap the abutting ends of the supports, as seen in Figs. 3 and 4, and thus further tend to steady the latter. The cage or platform is raised and lowered by means of gears *e*, which register with one another and with the racks, at the opposite sides of the frame, and are driven by means of a crank *f*, and pinion, *g*, the latter registering with one of the said gears; as will be understood upon reference to Figs. 1 and 3. As the cage is lowered the lower sections of the supports engage, successively, with a substantially trough shaped guide plate, *h*, preferably of sheet-iron secured in the box or receptacle A at each side, and are thereby carried laterally in opposite directions and conveniently disposed in said box, the hinged sections opening as each engages with said guide-plate to permit of such disposal, as will be readily understood upon reference to Figs. 1 and 3. When the cage is raised the sections readily and automatically adjust themselves into line again, as will be obvious. Said cage is held firmly in any desired position, within the scope of its movement, by means of a suitable clutch or brake, in the present case by a friction brake, *k*, operated by a lever *l*, fulcrumed to the frame at, *m*, Figs. 1 and 3, as will be understood. The cage is further steadied and supported in its ascent and descent by means of a central pole or rod, *o*, rigidly secured in the frame and projecting through the center of the cage and working therein. Said rod or pole is also made in sections which are joined by tenon and socket, *p*, as seen in Fig. 4, so that as the cage is raised and lowered the sections may be adjusted or removed, as the case may be, whereby, when the elevator is not in use the cage may be lowered and the said sections removed so as to permit the elevator to be housed in an ordinary building or engine house, as will be obvious.

By reference to Fig. 1, it will be observed that one end of the guide plate is shown broken away to expose the interior of the box.

The cage or platform is provided with guy ropes or chains, *q*, to connect with the truck

or with any other convenient object or structure to further steady and brace the same, when in use.

The bridge, *r*, shown in Fig. 2, is designed to project from either of the four sides of the platform; the hinge-pin being removable so as to connect the bridge with either of the four hinge-leaves, *s*, secured to the platform, as will be understood, to enable persons to reach the platform from the upper stories of a building or to pass from the platform to the building, as the case may be.

Having thus described my invention, what I claim is—

1. The improved elevator herein described, consisting of a box or receptacle, a frame mounted thereon, a trough like guide piece at each end of the box, sectional supports working vertically in said frame, a platform mounted on said supports, a device for steadying said platform, and means for raising and lowering the latter and holding it in position; as described and for the purposes set forth.

2. In an elevator, the combination with the cage or platform thereof, of a support secured to each corner thereof, each of said supports being composed of hinged sections, a frame in which said supports work vertically, means for raising and lowering said platform, and a box or receptacle to receive and house the sections of said supports when the latter are lowered, as and for the purposes set forth.

3. In an elevator, the combination with the cage or platform thereof, of sectional hinged supports, each support being provided with a toothed rack, one end of which projects beyond the end of said section and overlaps the end of the adjacent section, a box or receptacle to receive and house said supports, and guide-plates secured in said box to guide said sections, as described, and for the purposes set forth.

4. In an elevator, the combination, with a frame, of vertically movable supports therein, each support being composed of a series of sections hinged together, a cage or platform upon said supports, a jointed pole rigidly secured to the frame and projecting through the platform, and means for raising and lowering the supports and the platform, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 23d day of March, 1893.

WILLIAM M. S. GARRISON.

Witnesses:

OLIVER DRAKE,

OSCAR A. MICHEL.