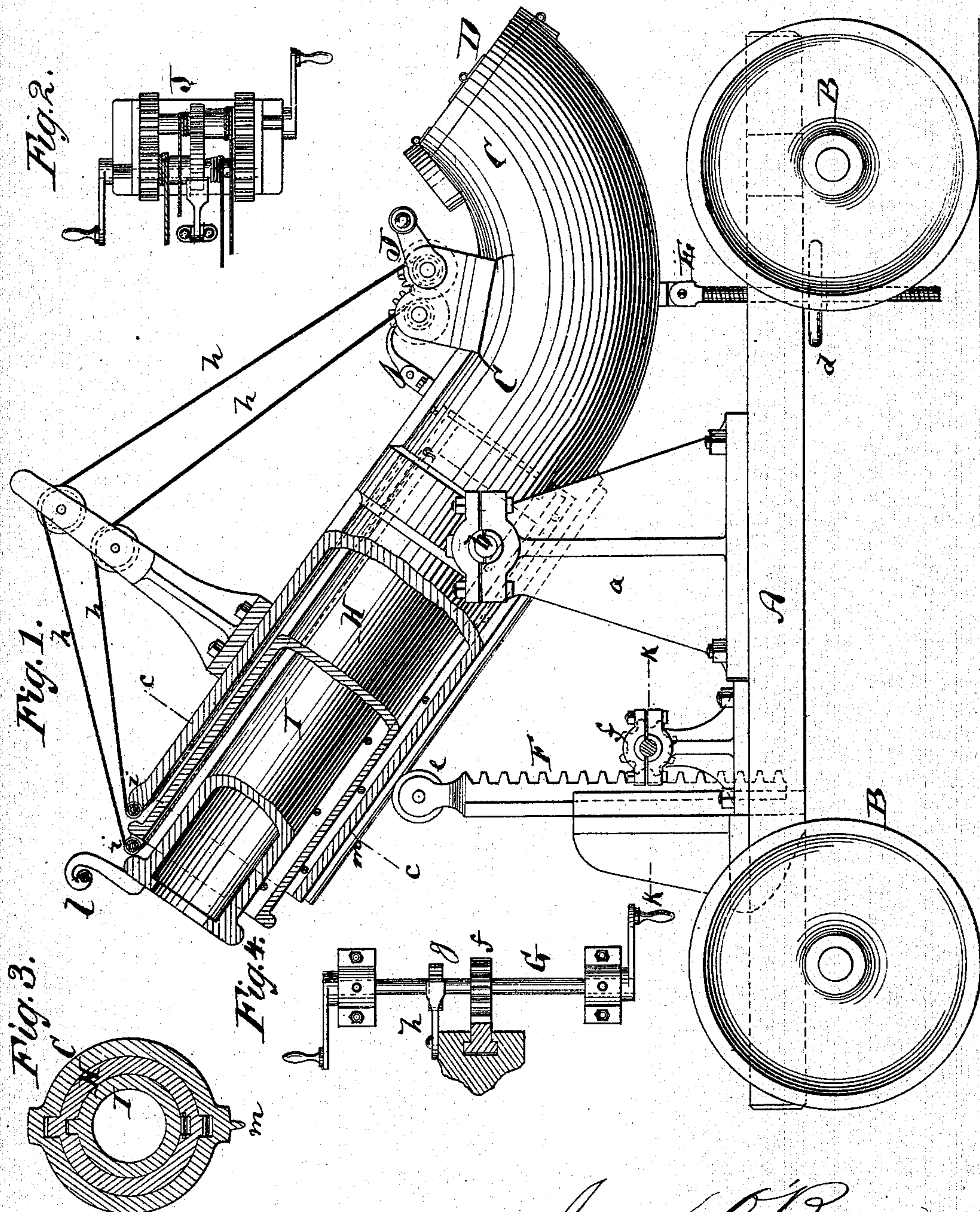


J. O'BRIEN.
Fire-Escapes.

No. 139,416.

Patented May 27, 1873.



Witnesses:
John Becker
Fred Harper

James O'Brien
by his Attorneys
Brown & Allen

UNITED STATES PATENT OFFICE.

JAMES O'BRIEN, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND CHARLES D. LAMARCHE, OF SAME PLACE.

IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. 139,416, dated May 27, 1873; application filed May 6, 1873.

To all whom it may concern:

Be it known that I, JAMES O'BRIEN, of the city, county, and State of New York, have invented an Improved Fire-Escape, of which the following is a specification:

Figure 1 is a side elevation, partly in section, of my improved fire-escape. Fig. 2 is a detail top view of the gearing used for extending and contracting the same. Fig. 3 is a detail cross-section on the line *c c*, Fig. 1.

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

This invention relates to a new fire-escape for the saving of lives and property during extensive conflagrations, being intended to serve as a conveyance or channel for directing the persons to be saved or the goods downward from any height; and it consists more particularly in the arrangement of telescopic tubing sufficiently large in diameter to accommodate the bodies and goods to be lowered, and curved at the lower end to constitute a convenient and safe exit of or discharge for such descending bodies or goods. My invention also consists in a new arrangement of mechanical means for bracing, supporting, and extending said telescopic tubing, and the application of a handle to the upper end of the same, and a lid to its lower end, all as hereinafter more fully described.

In the accompanying drawing, the letter A represents the body of a wagon or truck supported upon wheels B B, and made of suitable size and shape properly adapted for the support of my improved fire-escape. To uprights *a a* that project from the wagon is pivoted, by projecting trunnions *b b*, a tube, C, which is straight at one end and curved at the other, the curvature being taken on a circle whose center is above said tube, as indicated in Fig. 1. At the end of the curved portion, which is the lowermost end of the tube, the same is provided with a hinged lid, D, which can be opened or closed at will. At the convex lowermost part the tube is, by means of a jointed screw, E, connected with the wagon-body, and can, by turning a nut, *d*, on said screw, be swung up, more or less, into a horizontal or more or less inclined position. The upper part of the tube C rests on a friction-roller, *e*, which is hung in the upper end of a

vertical rack, F, said rack being in gear with a pinion, *f*, that hangs on a horizontal shaft, G, (see Fig. 4,) said shaft having also a ratchet-wheel, *g*, into which a pawl, *h*, fits with its end. By turning the shaft G, by means of a crank-handle at one or both ends, the rack F can be raised or lowered to bring its friction-roller *e* against the lower side of the tube C, no matter what degree of inclination said tube receives by the operation of the nut *d*. Into the upper part of the tube C is fitted a tube, H, somewhat smaller in diameter than C, and into this again a still smaller tube, I, and so on, a suitable number of tubes telescoping into each other being employed; and the several tubes are, by means of cords *h h* that connect with their lower ends, respectively, and pass over friction-rollers *i i* at the upper ends of their respective embracing-tubes, connected with suitable winding apparatus J, which is more fully shown in Fig. 2, and which is provided with a proper locking-pawl, *j*, whereby the tubes are retained in any suitable relative position.

By turning the winding apparatus, which consists of one or more shafts gearing into each other, the telescopic tubing is extended or contracted in the ordinary manner, and when the same has been extended to such degree that the upper end of the innermost tube reaches the window or place from which the persons or goods are to be removed the machine will be in position for operation. A handle, *l*, is applied to the upper end of the said innermost tube, and serves as a support for the persons who desire to enter the upper end of such innermost tube. Such persons when they have entered the tube will easily slide down along the same toward the neck or curved lower part of the tube C, and can then escape at the lower end thereof, the lid D being swung back.

Instead of making the tubing closed on all sides, as shown, it may be left open at the upper portion so that whoever descends may have the head free out of said tubing, and therefore in a more convenient position than the closed tubing would produce.

The lower side of the tube C may have a rib, *m*, formed on it to fit into a groove of the friction-roller *e*, and thus to serve also as a lat-

eral stay or brace. The upward curvature of the tube C serves materially to break the force of descent.

I claim as my invention, and desire to secure by Letters Patent—

1. The fire-escape for the bodily downward conveyance of persons and goods, when composed of telescoping tubing whose lower section is made with an upward curvature, substantially as herein shown and described.

2. The handle *l* applied to the upper end of the telescopic tubing, which is intended for

the bodily downward conveyance of persons, as described.

3. The adjusting-screw E and adjustable brace and rack F arranged on the truck A, in combination with the pivoted telescopic tubes C H I, as and for the purpose described.

4. The lid O applied to the bent lower end of the tube C of a fire-escape, as specified.

JAMES O'BRIEN.

Witnesses:

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