E. B. Larcher,

Fire Escape,

No. 30,033 Patented Nov. 13, 1860.

Fig: 1.

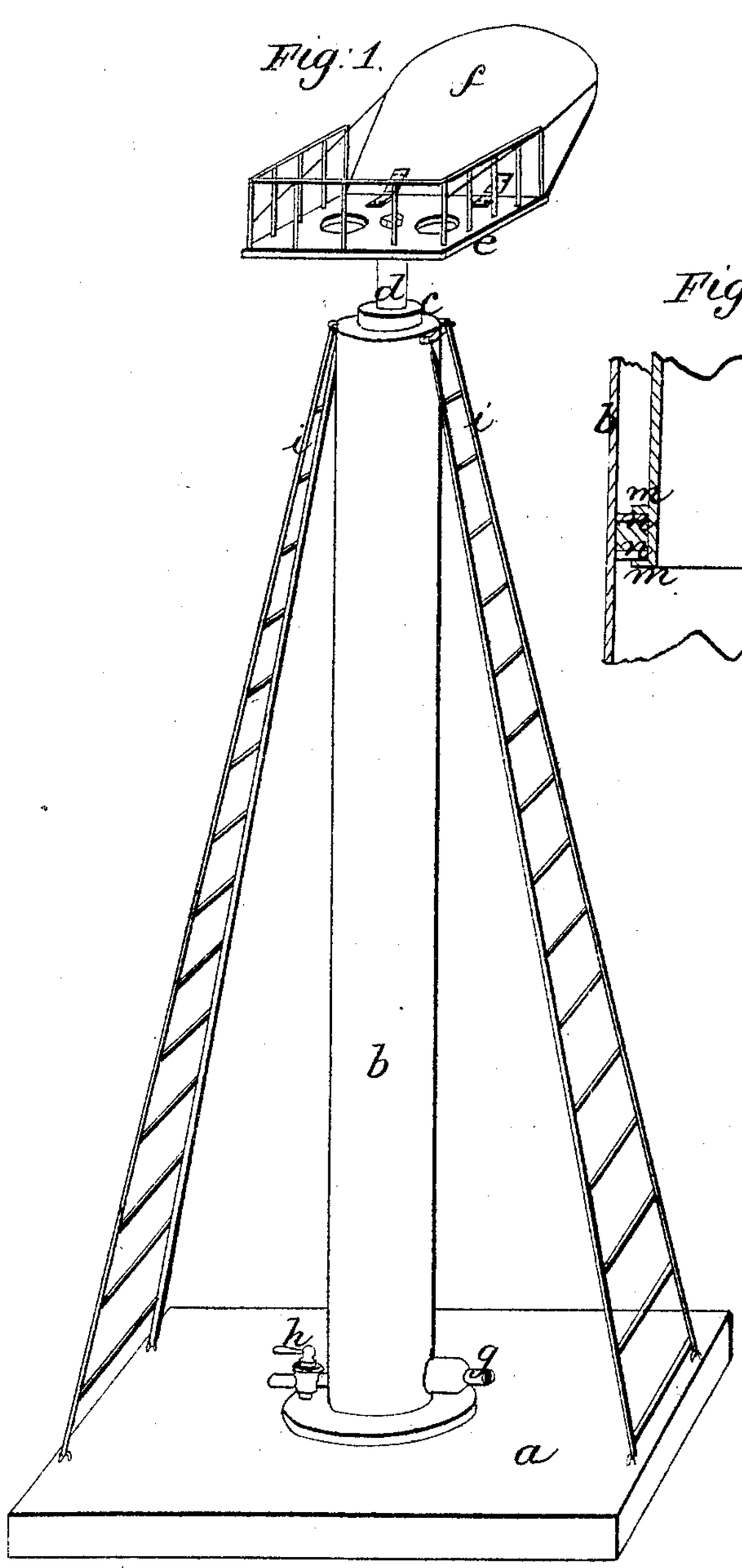


Fig: 3.

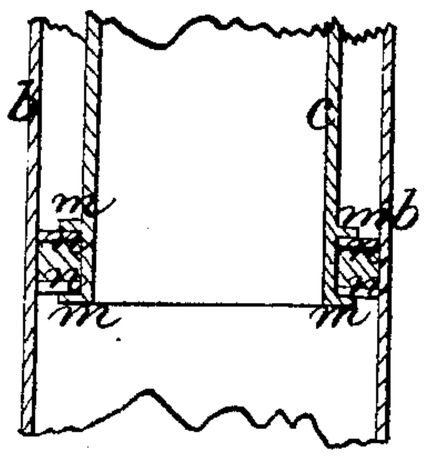
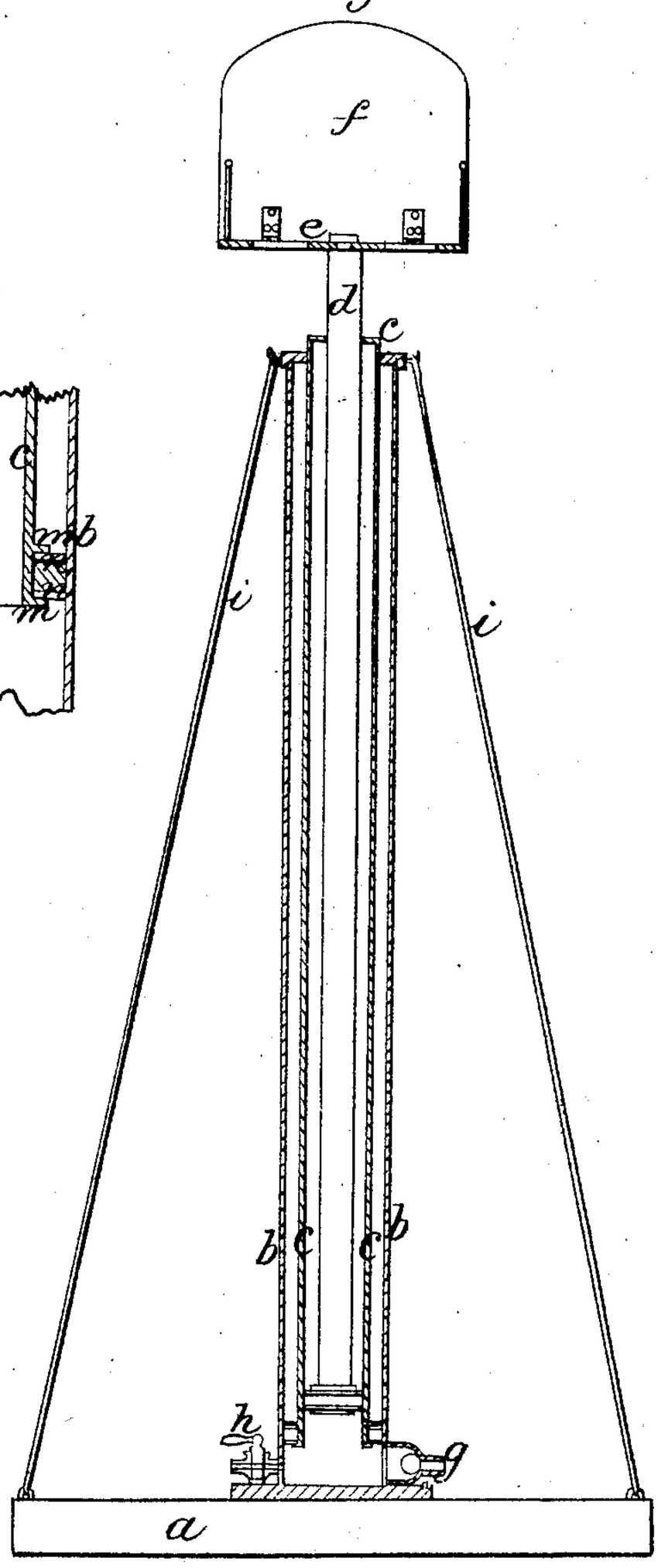


Fig: 2.



Witnesses
A. Jones
Thomas Sayer

Inventor;
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UNITED STATES PATENT OFFICE.

EDWIN B. LARCHAR, OF NEW YORK, N. Y.

IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. **30,633,** dated November 13, 1860.

To all whom it may concern:

Be it known that I, EDWIN B. LARCHAR, of the city, county, and State of New York, have invented a certain new and useful Apparatus for Fire-Escapes and Hose-Elevators; and I do hereby declare the following to be a full and exact description thereof, referring to the accompanying drawings, in which—

Figure 1 is a general view. Fig. 2 is a section; Fig. 3, details of packing.

My apparatus consists of a hydraulic or pneumatic elevator for raising a platform to the desired height and retaining it there or lowering it at will, the whole being governed by proper valves and stop-cocks, as hereinafter more particularly described.

The elevator is placed upon a proper carriage for transportation, and can readily be brought into operation and rapidly raised or lowered.

The construction is as follows: I form a stout framed platform or base, *a*, that may be placed on wheels for convenience of locomotion. At or near the center of this base *a*, I affix the lower end of a metal cylindrical hollow column, *b*, the lower end of which is closed. The interior surface of this cylindrical column is smoothened for a piston to play up and down air and water tight, if necessary. Within this first-named column there is another, *c*, also made hollow. Around the lower end this latter is surrounded by a packing, more particularly described hereinafter, so as to form a packed piston-joint between them. Within this second cylinder may be a third, and others may be added, according to the length of the cylinders and the height to which the upper end of the interior one is to be raised.

The interior column may be solid, and each is similarly packed at its lower end as the second one. On the upper end of the inner cylinder or column, *d*, there is a platform, *e*, made light, but sufficiently strong for the purpose it is intended, around which I construct a guard-rail to protect persons standing on the platform; and I further shield them from fire in passing up and down by a metal shield, *f*, which is hinged to the platform, and can be raised or lowered at will of the occupants of the platform to protect them from the flames of the burning building. When this apparatus is to be elevated, a stream of water or air, as the case may be, is forced into the outer column, *b*, through a small pipe, *g*, opening into its lower end, which, pressing upon the interior cylinders, forces them out, like the joints of a telescope, and the platform *e* is thereby elevated. This pipe *g* should have a ball-valve or other equivalent to prevent the return of the water forced in. A stop-cock, *h*, is also connected with the column *b*, by which the water or air may be discharged to regulate and control the descent. To gain access to the platform or top *e* when down, I affix ladders *i* to the top of the column *b*. These ladders *i* may also serve as guys to steady the column, which can be kept firmly upright or inclined either by tipping platform *a* or jointing column *b* properly thereto for the purpose. Other guys may be also affixed to the upper part to steady and sustain the apparatus in working.

The packing, which is shown in Fig. 3, consists of two small collars, *m*, made fast to the cylinder, within the space between which are two larger loose collars, *n*. These loose collars have the elastic packing, which is used placed between them, so that when a force is brought against the lower column it drives it against the packing, and the upper column, being held by the collar *m*, serves to press the packing out against the surface of the interior of the outer cylinder and make a tight joint with a force equal to the pressure and resistance.

Having thus fully described my new fire-escape, what I claim as new is—

1. Elevating a platform or other equivalent device by means of a telescope column, substantially as and for the purposes set forth.

2. The piston-joint composed of the fast and loose collars and elastic packing, as described.

EDWIN B. LARCHAR.

Witnesses:
JULIUS HENNIS.
THOMAS JAMES.