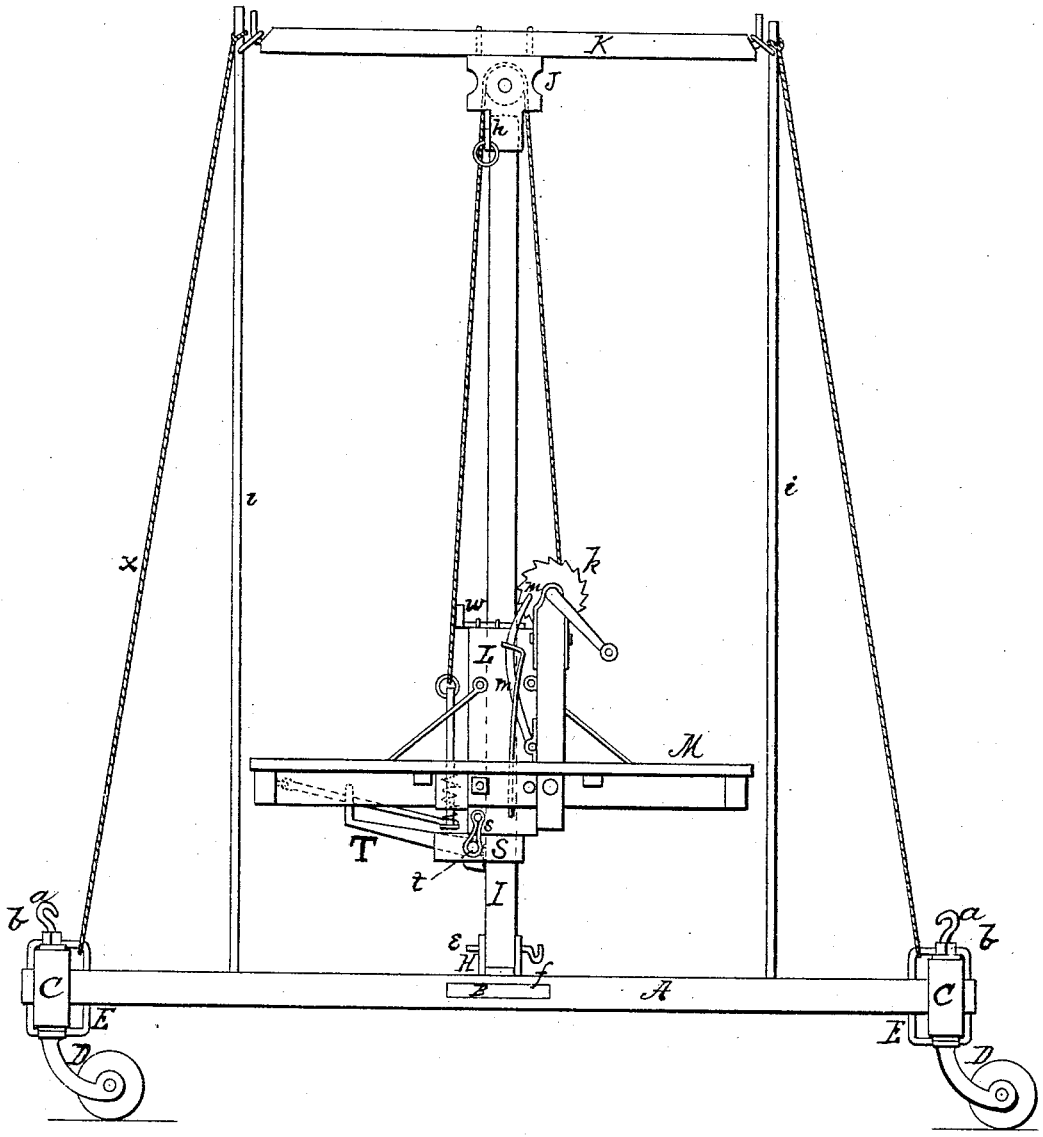
2 Sheets—Sheet 1.

A. MILLER.

PORTABLE-ELEVATOR.

No. 182,380. Patented Sept. 19, 1876.

Fig. 1.



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2 Sheets—Sheet 2

A. MILLER.

PORTABLE-ELEVATOR.

No. 182,380. Patented Sept. 19, 1876.

Fig. 2.

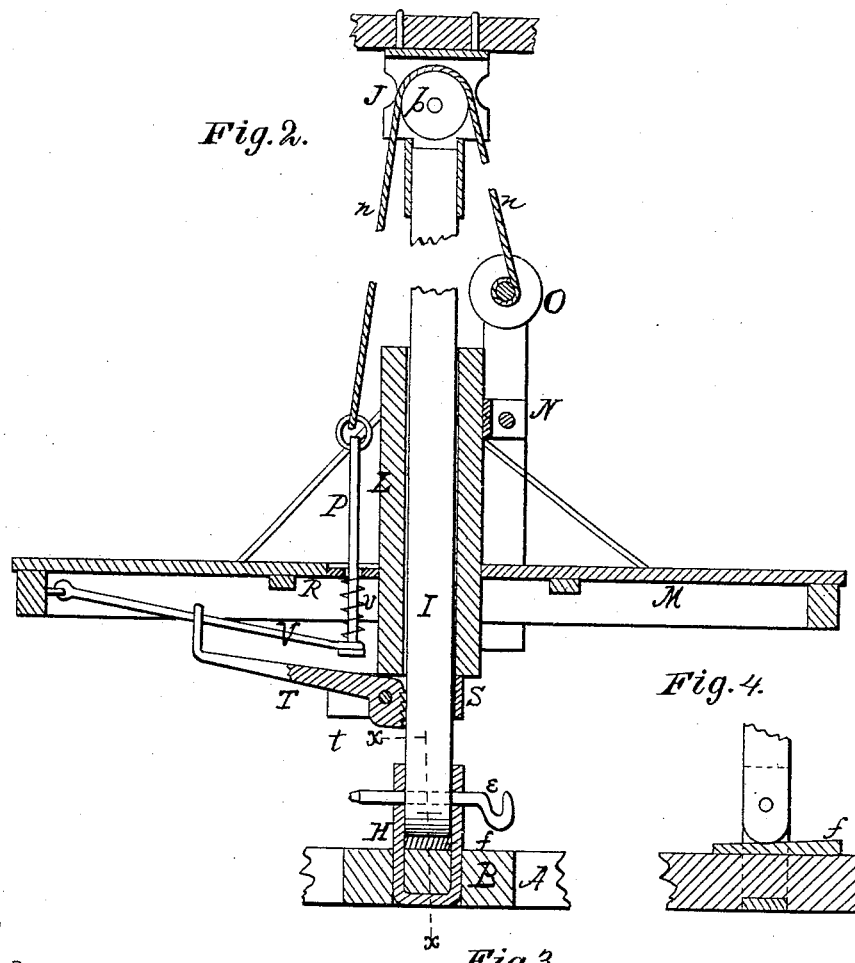


Fig. 4.

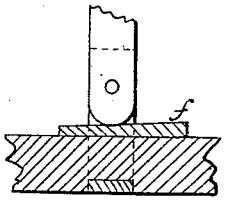
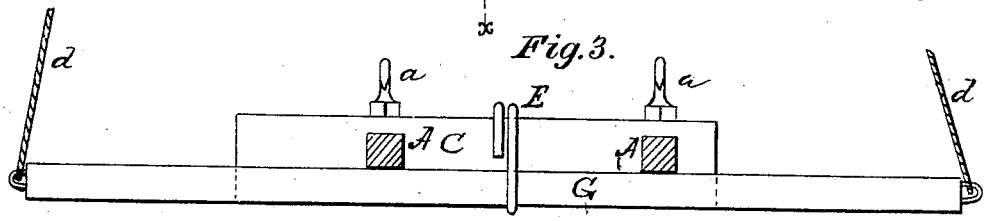


Fig. 3.



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UNITED STATES PATENT OFFICE.

ANDREW MILLER, OF GUNTERSVILLE, ALABAMA.

IMPROVEMENT IN PORTABLE ELEVATORS.

Specification forming part of Letters Patent No. **182,380**, dated September 19, 1876; application filed August 4, 1876.

To all whom it may concern:

Be it known that I, ANDREW MILLER, of Guntersville, in the county of Marshall and State of Alabama, have invented certain new and useful Improvements in Portable Elevator and Fire-Escape; and I do hereby declare that the following is a full, clear, and exact description thereof, which 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 the letters of reference marked thereon, which form a part of this specification.

The nature of my invention consists in the construction and arrangement of a portable elevator and fire-escape, as will be hereinafter more fully set forth.

In the annexed drawings, Figure 1 is a side elevation of my machine. Fig. 2 is a longitudinal vertical section through the platform and adjacent parts. Figs. 3 and 4 are views of detached parts of the machine. The base or base-frame of my elevator is composed of two parallel beams, A A, connected by suitable cross-bars and a center platform, B. At each end of this frame is a head-piece, C, mortised for the reception of the ends of the beams A A, and fastened thereto by means of hook-bolts *a a*. These hook-bolts can easily be taken out when desired to take the base apart; and when in place they are used to hold or pull by in moving the elevator or to fasten guy-ropes to, as the case may require.

At the ends of the head-pieces C C are caster-wheels D D, held thereto by means of nuts *b b*, so that said wheels can be removed at will when desired.

Upon each head-piece C is placed a large iron stirrup, E, for the purpose of clasping or holding two long pieces, G, of base timber, which are used to steady the elevator when the wheels are detached, and in the ends of said timbers are suitable staples for fastening guy-ropes *d d*. These timbers are left loose enough to slide back and forth in order to place the elevator against buildings or any sort of walls.

In the platform B is secured a large iron stirrup, H, in which the lower end of the main shaft or standard I is held firmly by means of a bolt, *e*, and wedge *f*, as shown in Figs. 2 and 4. On the upper end of the standard I is a pulley-frame, J, with side arms *h* containing rings for fastening guy-ropes or hand-ropes. On the top of the pulley-frame J is a cross-head, K, to which are fastened guide-rods *i i* for the purpose of steadying the standard and supporting guy-ropes *x*, as shown. On the main shaft or standard I is a sleeve or sash, L, to which the platform M is suitably connected and braced, said sleeve holding the whole apparatus firmly and steadily while ascending and descending the main shaft. The platform M is provided with a frame, N, in which is mounted a windlass, O, provided with a ratchet-wheel, *k*, and a spring-pawl, *m*, takes into said ratchet-wheel to prevent the windlass from turning in the wrong direction. This windlass is used for raising and lowering the platform by means of a hoisting-rope, *n*, which is attached to the windlass and passes over a pulley, *p*, in the frame J at the top of the main standard and down on the other side thereof, where it is attached to a lap-ring in the top of a slide-bolt, P, for operating the spring tension of the safety-catch hereinafter described. The bolt P passes through a clasp, R, used as a strengthening bar for the timbers of the platform M.

Immediately under the lower end of the sleeve L is a metal stirrup or clasp, S, surrounding the main shaft or standard I on three sides, and which is suspended from the sleeve by loops *s*. Through these loops passes a bolt, *t*, which also passes through the ends of the stirrup S and pivots between them a safety-catch lever, T. The inner end of this lever is corrugated or toothed to bind on the side of the standard I, as shown in Fig. 2, while the outer end is formed with an eye or loop, through which passes an arm, V. One end of this arm is pivoted under the platform M, and the other end is connected to the lower end of the bolt P. Between this end of the bolt and the clasp R is a coiled spring, *v*, around the bolt.

The safety-catch lever T is for the purpose of stopping the platform and holding it firmly to the main shaft in the event that the hoisting-rope *n* should break. When the windlass is turned to raise the platform the rope *n* draws the slide-bolt P and compresses the coil-spring *v*, and by means of the arm V loosens

the safety-catch from the main shaft, and the platform rises with but little friction; but should the hoisting-rope break, the spring *v* at once throws the safety-catch against the main shaft, that in conjunction with the clasp or stirrup S (which is suspended by the swinging loops *s*) it will hold the platform safely and permanently. For lowering the platform a slide, *w*, on top of the sash or sleeve L, is pushed back, which removes the spring *m* from the ratchet-wheel *k*, when the platform will descend, the speed thereof being regulated by means of the crank of the windlass.

It will be seen that this elevator is entirely safe to the operator, thereby adding a feature of great importance to self-elevators.

The attachment of caster-wheels to the base makes the elevator portable and susceptible of being moved and removed anywhere and in any direction with but little force. The cross-head K and rods *i* may be removed or detached when a sufficient number of guy-ropes are used.

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

1. The combination, in an elevator, of the parallel beams A A, center platform B, side pieces C C, with hook-bolts *a a*, and the removable casters D D, substantially as and for the purposes herein set forth.

2. The combination of the side piece *c*, stirrup E, timber G, and guy-ropes *d*, substantially as and for the purposes herein set forth.

3. The combination of the platform B, stirrup H, standard I, bolt *e*, and wedge *f*, substantially as herein set forth.

4. The combination of the standard I, pulley-frame J, cross-head K, and rods *i i*, substantially as herein set forth.

5. The combination of the hoisting-rope *n*, sliding bolt P, with spring *v*, the arm V, and safety-catch lever T, with the platform and the standard, substantially as and for the purposes herein set forth.

6. The combination, with the standard I and sash L, of the swinging loops *s*, clasp or stirrup S, bolt *t*, and safety-catch lever T, substantially as herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

ANDREW MILLER.

Witnesses:

W. ELLIOTT,

JNO. D. TAYLOR.