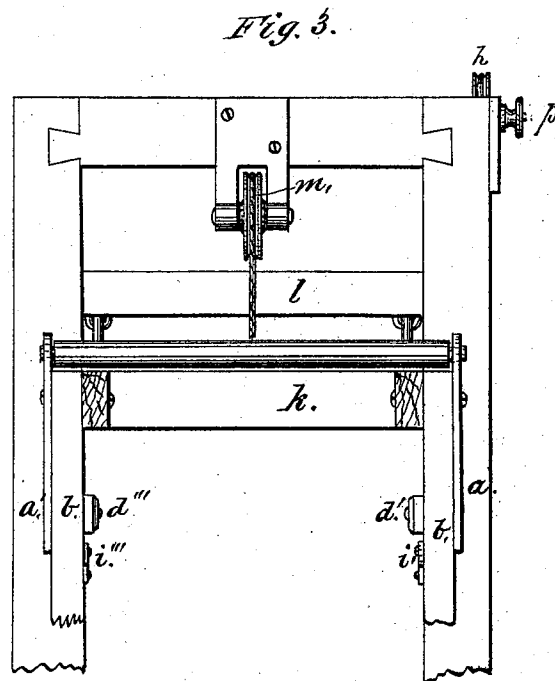
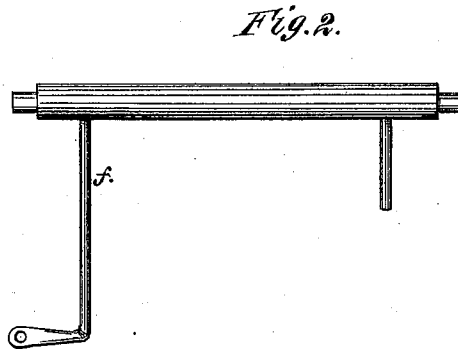
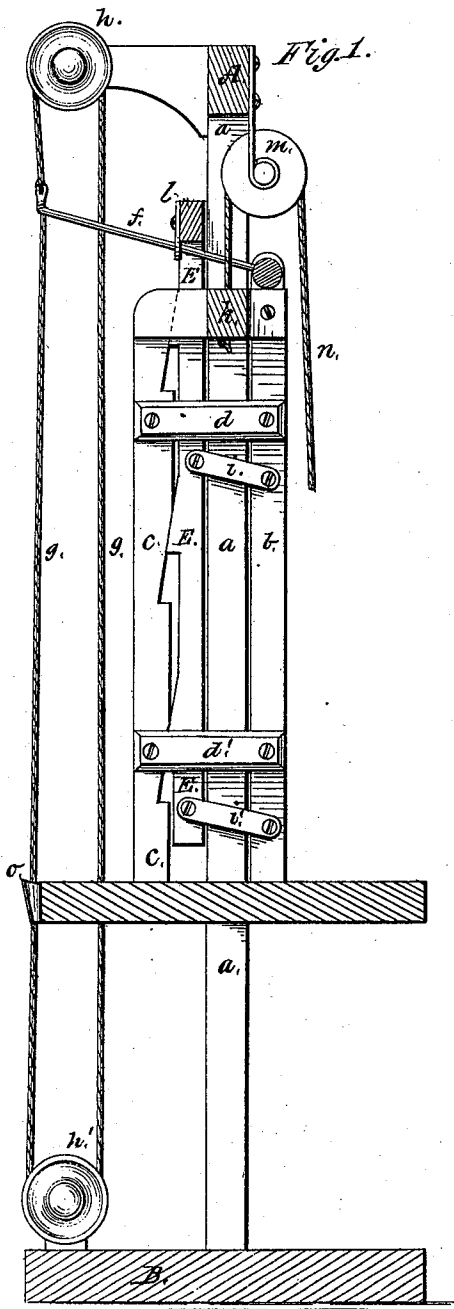


H. SNOWDEN.

SAFETY-BRAKE ON ELEVATOR-PLATFORMS.

No. 172,792.

Patented Jan. 25, 1876.



Witnesses:

James Hart
Clarence Greene

Inventor:

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UNITED STATES PATENT OFFICE.

HENRY SNOWDEN, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN SAFETY-BRAKES ON ELEVATOR-PLATFORMS.

Specification forming part of Letters Patent No. **172,792**, dated January 25, 1876; application filed December 1, 1875.

To all whom it may concern:

Be it known that I, HENRY SNOWDEN, of the city of Baltimore, State of Maryland, have invented certain Improvements in Safety-Brakes on Elevator-Platforms, of which the following is a specification:

The first part of my invention relates to certain racks and links and clamping-bar placed on and attached to the platform itself of the elevator, in such manner that, being firmly stayed across the guide, they clamp the latter automatically on the occurrence of any sudden fall of the said platform from its fastenings.

Figure 1 is a vertical and lateral section of my brake, its racks, links, clamping-bar, and stays in position, embodying my invention. Fig. 2 is a detail view, showing the lever *f*, Fig. 1. Fig. 3 is a rear elevation of the upper part of my brake, showing the fulcrum of lever, cross-beam for attaching the hoisting-rope, holding the upper end of guides of the elevator, &c.

a is one of the guides supporting and conducting the platform.

b, Figs. 1 and 3, are clamping-bars.

c, Fig. 1, is a stationary rack, connected, by stays *d d'*, Fig. 1, to clamping-bar *b*, and firmly secured to the cross-head *k*, Figs. 1 and 3, and to the platform-floor.

d d' are stays, Figs. 1 and 3, holding in place rack *c* and clamping-bar *b*.

e e e is a movable rack, having a slight vertical motion controlled by lever *f*, Figs. 1 and 2.

f is a lever, operated by the rope *g g*, Fig. 1.

h h' are stationary carrier-pulleys, which receive the rope *g g*, and admit of the latter running in accordance with the movement of the platform.

i i' i'' i''' are links, auxiliary in clamping movable rack *e e e*, Fig. 1, and clamping-bar *b*, Figs. 1 and 2, against the guides *a*.

k is the cross-head of the platform arrangement, to which the hoisting-rope *n*, Figs. 1 and 3, is attached.

l, Figs. 1 and 3, is a cross-bar, holding together the movable racks *e*, which are on opposite sides of the platform, and also having a slotted suspender to support and work lever *f*, Figs. 1 and 2.

m is the hoisting-pulley, Figs. 1 and 2.

n is the hoisting-rope, Figs. 1 and 2.

o is a spring in form of a double cone, connected at the lesser diameter, and opened along its length to admit the rope *g*.

p is a friction-nut, to press on carrier-pulley *h*, Fig. 1.

A is the top of the elevator.

B is the bottom of the elevator—the floor.

The operation of my improved elevator safety-brake is thus: As the platform is raised, carrying up every part of my brake, the fulcrum of lever *f* assumes a position that permits the said lever (its long arm being attached to rope *g*) to free the movable rack *e* from the clamping-pressure at the inclines, and enables an unrestricted upward motion.

When the platform falls from casualty the reverse of the above-named movement happens.

A sudden fall causes sufficient friction on the carrier-pulley *h*, Fig. 1, to operate (raise) the lever *f*, and with it the movable rack *e*, until the inclines of the latter engage the inclines of stationary rack *c*, when, with the assistance of links *i i' i'' i'''*, the clamping-bar on the one side and the said movable rack on the other side of the guide of the elevator, clamp the said guide firmly, and thus sustain and support the platform, not by a heavy blow, but by powerful and steady pressure.

Having thus described my invention, what I claim is—

1. A movable rack, which, by a wedging operation of its inclines, shall be pressed against the elevator-guides, and, by its friction, and produce a safety-brake, as set forth.

2. I claim the links *i i' i'' i'''* across the face of an elevator-guide, connecting a movable and a stationary clamping-piece, for the purpose of clamping between the said pieces the guide or guides of the elevator, for the purposes specified.

3. I claim the combination of a movable rack, a stationary rack, links *i*, lever *f*, and clamping-bar with an elevator-platform, to make a safety-brake.

HENRY SNOWDEN.

Witnesses:

CLARENCE GREENE,
JAMES HART.