S. H. BEVINS & J. WEIS.

Safety-Stops for Elevators.

No. 153,278. Patented July 21, 1874.

Fig. 1.

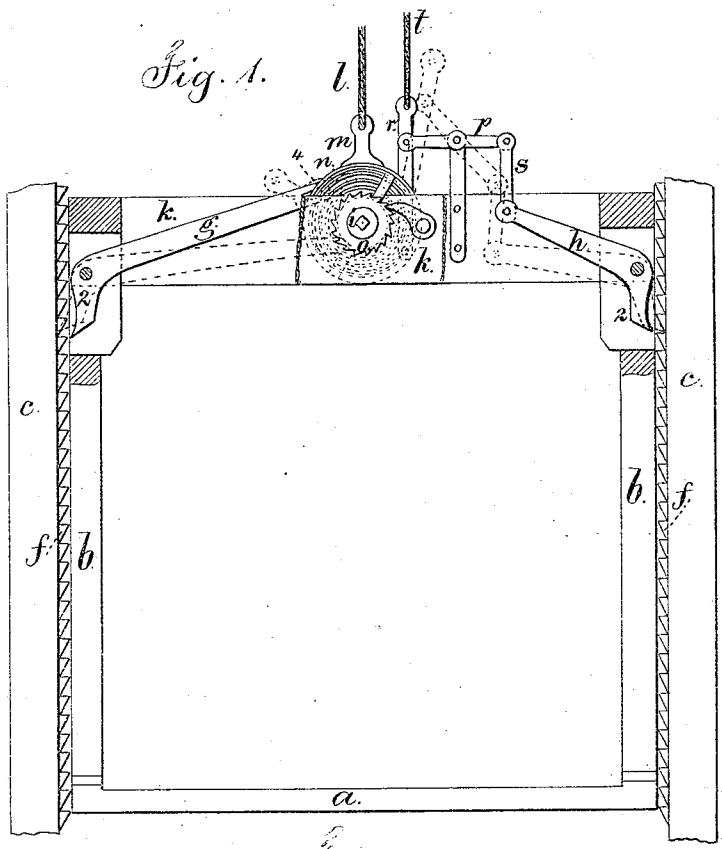
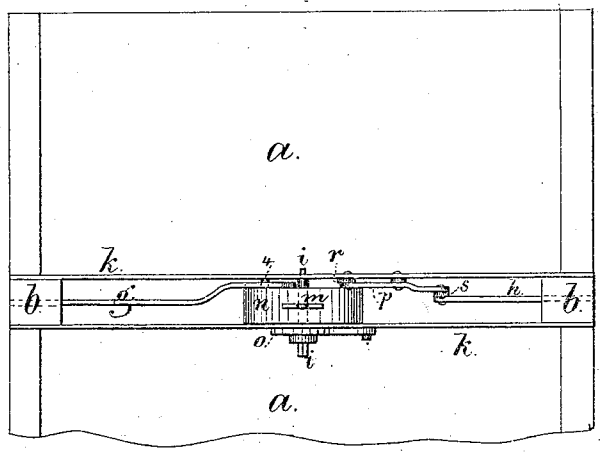


Fig. 2.



Witnesses

Chas. H. Smith

Harold Serrell

Inventors

Seth H. Bevins

Joseph Weis.

per Lemuel W. Serrell

atty.

UNITED STATES PATENT OFFICE.

SETH H. BEVINS AND JOSEPH WEIS, OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN SAFETY-STOPS FOR ELEVATORS.

Specification forming part of Letters Patent No. **153,278**, dated July 21, 1874; application filed April 7, 1874.

To all whom it may concern:

Be it known that we, SETH H. BEVINS and JOSEPH WEIS, of Jersey City, in the county of Hudson and State of New Jersey, have invented an Improvement in Safety-Stop for Elevators, of which the following is a specification:

Elevators have been made with bent levers connected to the hoisting-rope, and the short arms of these levers form pawls that catch into ratchet-teeth upon the guideways, in cases where the rope breaks; and springs have been made use of to withdraw the pawl-levers out of the notched guides when the rope breaks.

Our invention is made for applying a coiled spring to withdraw the safety-pawls out of the notched guides, and applying it in such a manner that there will not be risk of the spring becoming broken or set by continued tension; neither will the spring remain of uniform tension, but can be adjusted from time to time to ascertain that it is in proper working condition, and to regulate the power of the spring according to the weight that is to be hoisted, thereby insuring greater rapidity of action with heavy weights.

In the drawing, Figure 1 is an elevation of the safety-stop as applied to an elevator, and Fig. 2 is a plan of the same.

The platform *a*, frame *b*, guide-slides *c*, and ratchet-teeth or racks *f*, are of usual character. The bent levers *g* and *h* are between the plates *k* of the head-block, the ends 2 of such levers being adapted to take the rack *f*, and sustain the car in cases where the rope breaks. The hoisting-rope *l* is connected to the arm *m*, that is upon or connected to the spring-barrel *n*, and within this barrel *n* there is a coiled spring, (shown by full and dotted lines,) one end of the spring being connected to the barrel and the other to the shaft *i*. This shaft *i* may be revolved by a key or wrench, and held by a ratchet-wheel, *o*, and pawl. By this means the spring can be set up to any desired amount, and hence will act with more or less rapidity. The lever *g* is connected to the pin 4 on this barrel *n* by a slot or link, and the lever *h* is connected also to the barrel *n*, through the beam *p* and links *r* and *s*, so as to reverse the movement derived from the turning of the spring-barrel, and throw the pawl ends of the levers *g* and *h* both outwardly in the positions shown by the dotted lines, in consequence of the partial rotation of the spring-barrel when the rope may break. A check-rope, *t*, and counter-weight may be employed in addition to the spring-barrel.

We claim as our invention—

1. The spring incased or held within the barrel to which the hoisting-rope is connected, in combination with the pawl-levers *g* and *h*, and beam *p*, and connecting-links *r* and *s*, substantially as and for the purposes set forth.

2. In an elevator, a coiled spring within a barrel, connected with the hoisting rope or chain, and the safety-stops or pawl-levers *g h*, and a ratchet-wheel and pawl for retaining the spring when set up to a greater or less extent, substantially as set forth.

Signed by us this 20th day of March, 1874.

SETH H. BEVINS.
JOSEPH WEIS.

Witnesses:
GEO. T. PINCKNEY,
CHAS. H. SMITH.