

C. L. PAGE.  
Belt Safety Attachment for Elevators.

No. 216,528.

Patented June 17, 1879.

Fig. 1.

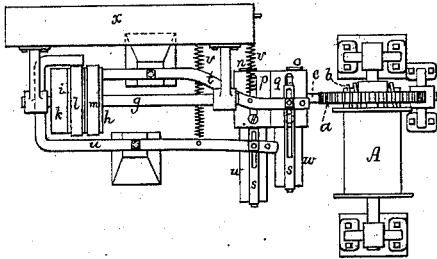


Fig. 4.

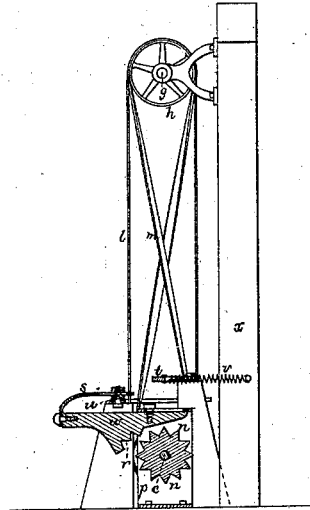


Fig. 2.

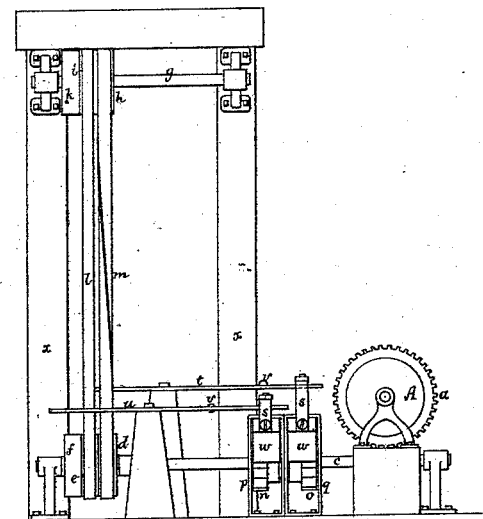
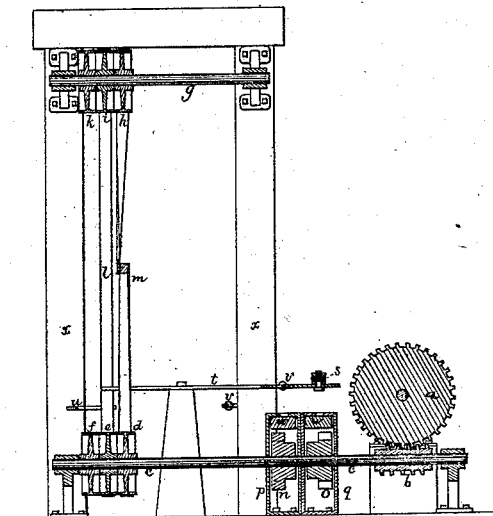


Fig. 3.



Witnesses:

*S. N. Piper*

*Mr. H. Lind*

Inventor.

*Carlos L. Page*

by attorney.

*R. H. Eddy*

# UNITED STATES PATENT OFFICE.

CARLOS L. PAGE, OF HEBRON, NEW HAMPSHIRE.

## IMPROVEMENT IN BELT SAFETY ATTACHMENTS FOR ELEVATORS.

Specification forming part of Letters Patent No. 216,528, dated June 17, 1879; application filed April 9, 1879.

*To all whom it may concern:*

Be it known that I, CARLOS L. PAGE, of Hebron, of the county of Grafton and State of New Hampshire, have invented a new and useful Belt Safety Attachment for Elevators for Buildings; and do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, and Fig. 2 a front elevation, of it as applied to the operative belts and secondary shaft of the working-drum of an elevator. Figs. 3 and 4 are vertical sections taken through the ratchet-wheels and racked or toothed wedges, to be hereinafter described.

My invention is intended to prevent the elevator-car from falling down or descending in case of breakage of either of its driving-belts. It is customary to combine with such a car and its operative chain or rope an attachment to effect a stoppage of the car in case of breakage of the said rope; but my present invention is additional, and, as stated, is to prevent a fall of the car in case of breakage or disarrangement of either of its driving-belts.

In the drawings, A represents the drum for working the suspension-rope of the elevator, such drum being provided with a gear, *a*, to engage with a worm or screw, *b*, fixed on the secondary shaft *c*. This shaft *c* carries three pulleys, *d e f*, the middle one of which is what is termed a "fast pulley," while the others are "loose pulleys." Over these, and applied to the driving or primary shaft *g*, are three other such pulleys, *h i k*, all of which are fast pulleys. Two endless belts, *l m*, one of which is crossed, work with these sets of pulleys. One of such belts is to be on one of the loose pulleys, while the other is on two of the fast ones. Consequently, by one belt the secondary shaft is revolved in one direction, and by the other in the opposite way, in order to effect the raising or lowering of the elevator-car, all such devices being such as are usually employed with what are termed "store-elevators."

In carrying out my invention I fix on the

secondary shaft two gears or toothed wheels, *n o*, arranged in stationary housings *p q*, through which the shaft extends. Within each of such housings, and over its gear, is a sliding wedge, *w*, provided with a rack or teeth, as shown at *r*, to engage with those of the gear. From these toothed wedges slitted arms *s s* project, in manner as shown, and are pivoted to two levers, *t u*, formed and arranged with the belts in manner as represented. Each lever has a spring, *v*, applied to its inner arm and to the frame *x*, such spring operating to draw the said arm toward the frame, so as to cause the toothed wedge of such arm to be forced inward within the housing and against the gear therein.

While either band is intact it prevents the lever resting against it from being moved by the spring applied to such lever; but should such band break, the spring will be free to move the lever, so as to cause its toothed wedge to be forced into engagement with the gear in its housing. As the wedge may be advanced it will bear against the top part of the housing, and will so block the gear as to prevent it from revolving. Consequently, the drum will be held firmly, so as to prevent the car from accidentally descending, as stated.

I claim—

1. In combination with the elevator-drum A and its operative mechanism—viz., the gear *a*, the screw *b*, shafts *c g*, pulleys *d e f h i k*, and their belts *l m*—the described safety apparatus, consisting of the gears *n o*, housings *p q*, toothed wedges *w w*, levers *t u*, and springs *v v*, all being arranged substantially in manner and to operate as set forth.

2. The combination of the levers *t u*, toothed wedges *w w*, housings *p q*, springs *v v*, and gears *n o*, to be applied, as described, to the secondary shaft and the driving-belts thereof of an elevator-car operative mechanism, substantially as described.

CARLOS L. PAGE.

Witnesses:

R. H. EDDY,  
W. W. LUNT.