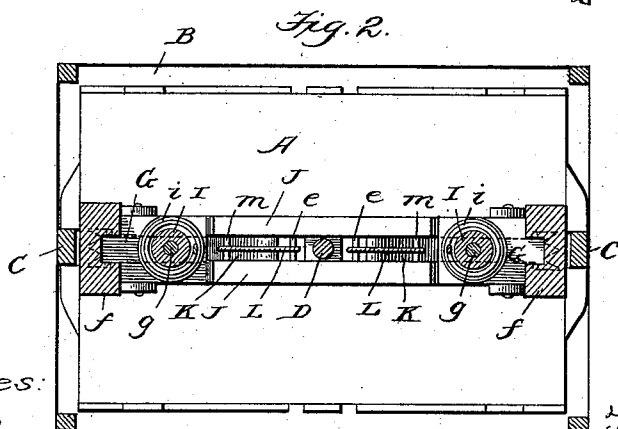
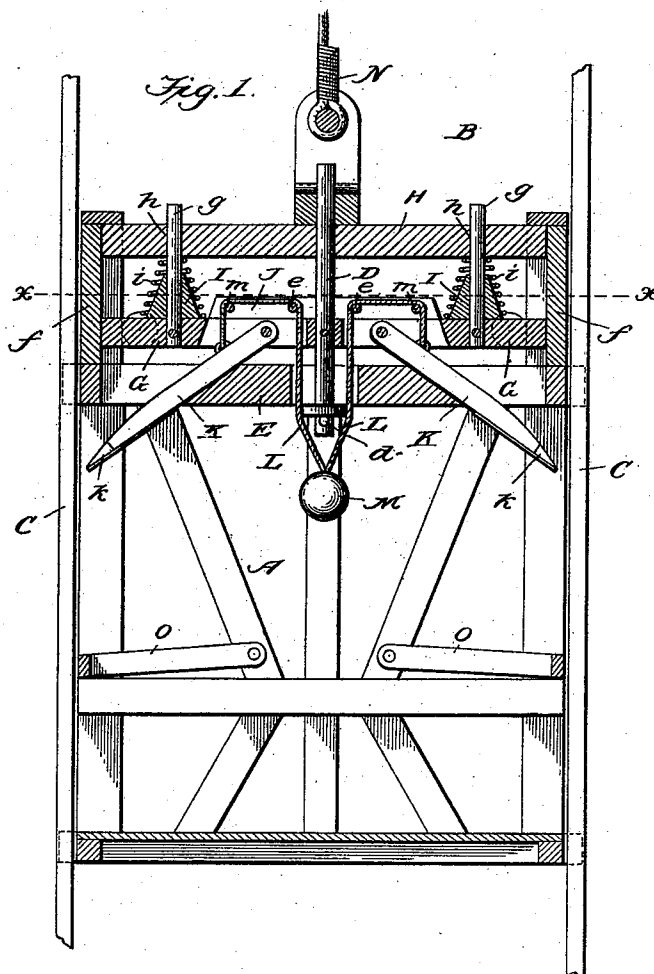


(No Model.)

T. TRESL.
ELEVATOR.

No. 534,382.

Patented Feb. 19, 1895.



Witnesses:

Gerald Griffin
Ralph Wormell

Inventor
Tan. Tress
per
Patrick O'Donnell
Attorney

UNITED STATES PATENT OFFICE.

TAN TRESL, OF OXFORD, IOWA.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 534,382, dated February 19, 1895.

Application filed September 4, 1894. Serial No. 522,080. (No model)

To all whom it may concern:

Be it known that I, TAN TRESL, a citizen of the United States of America, residing at Oxford, in the county of Jones and State of Iowa, have invented certain new and useful Improvements in Elevators, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to elevators for passengers and freight and aims to improve that class of hoisting machines provided with safety appliances which regain themselves on the breakage of the lifting rope, and fly into operative position to engage with guides or other suitable portion of the well shafting and sustain the weight of the cage or platform.

The primary object of the invention is to equip the cage or platform with safety appliances which shall at all times be under the control of the passengers or tender so as to be thrown into operation at a moment's notice to check the descent of the car when required for any purpose, and which at the same time will be automatic in their action on the car descending at an abnormal speed caused by the breakage of the lifting rope, the slipping of the same from the hoisting drum or from any cause tending to let the car drop or descend rapidly.

The improvement will be more fully understood from the annexed drawings and the following description and is set forth in the subjoined claim.

In the drawings,—Figure 1— is a central vertical section of an elevator cage showing the application of the invention. Fig. 2— is a horizontal plan section on the line *xx* of Fig. 1.

The letter A represents a car of usual construction for carrying freight or passengers, and B the shaft in which the car travels.

C indicates the guides which steady the movements of the car and receive the stress of the levers K by means of which the car is supported when required. Two standards *f* rise vertically from the cross beam E to which the draft of the elevating rope is applied through the draw bar D which works loosely in the said beam. A pin *d* and washer mounted on the lower end of the draw-bar limits the upward movement thereof by engagement

with the lower side of the beam E. The standards *f* have grooves in their inner sides forming guideways for the ends of a bar G. A cross timber H secured at its ends to the upper ends of the standards is apertured in coincident relation with the beam E to receive and admit the workings of the draw-bar D. Conical shaped weights I are disposed near the ends of the bar G to hold the latter down on the beam E. Conical shaped springs *i* mounted upon the weights supplement their action and serve to press the bar G close against the beam E. Rods *g* attached to the bar G at their lower ends pass through the weights I and upper ends of the springs *i* and work in openings *h* in the cross timber H.

The check levers K are pivoted near their inner ends to the bar G and pass between the companion pieces constituting the bar G and beam E. The outer ends of the levers terminate in a claw *k* which is beveled to a chisel edge so as to bite into the guides C. A counterbalancing weight M hangs suspended within the car within convenient reach and is connected by cords L with the levers K. These cords pass over guides *e* and *m* provided upon the upper bars J.

The hoisting or elevating rope N is attached to the draw-bar D, and, the latter being secured to the cross-bar G, elevates said cross-bar against the tension of the springs *i* and the force of the weights I, when carrying the load, and withdraws the ends of the levers K from engagement with the guides C. Should the hoisting rope slacken for any reason, either by breakage or slipping of the ropes on the hoisting drum, the bar G will quickly lower by the action of the springs *i* and weights I and project the ends of the levers K into engagement with the guides C and check the descent of the car. Again by drawing down upon the weight M the levers K can be projected into engagement with the guides C when required even should there be no slacking of the hoisting rope.

The bar O has its ends bent and pivotally attached to sides or braces of the car and forms a guard to hold goods in place upon the car. There will be similar bars O, one for each side of the car, and when loading or unloading freight from one side the bar corresponding to the side at which the loading

or unloading is to be effected is elevated by simply being thrown up, the other bar remaining down to form the guard.

The weight M is not of sufficient mass to
5 overbalance the check levers K and is mainly provided to act in the capacity of a pull to be operated from within the car to apply the check levers when required.

I claim—

10 The combination with an elevator car having vertical standards, a cross-bar guided in its movements by the said standards, and a draw-bar secured to the cross-bar, of weights and springs applied to the cross-bar to act in

opposition to the hoisting or lifting force, 15 check-levers pivotally attached to the cross-bar and normally held out of active operation, and a counterbalancing weight within convenient reach from the interior of the car operatively connected with the said check levers, 20 substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

TAN TRESL.

Witnesses:

ANTON SHEMERLHA,
A. J. WOSOB.