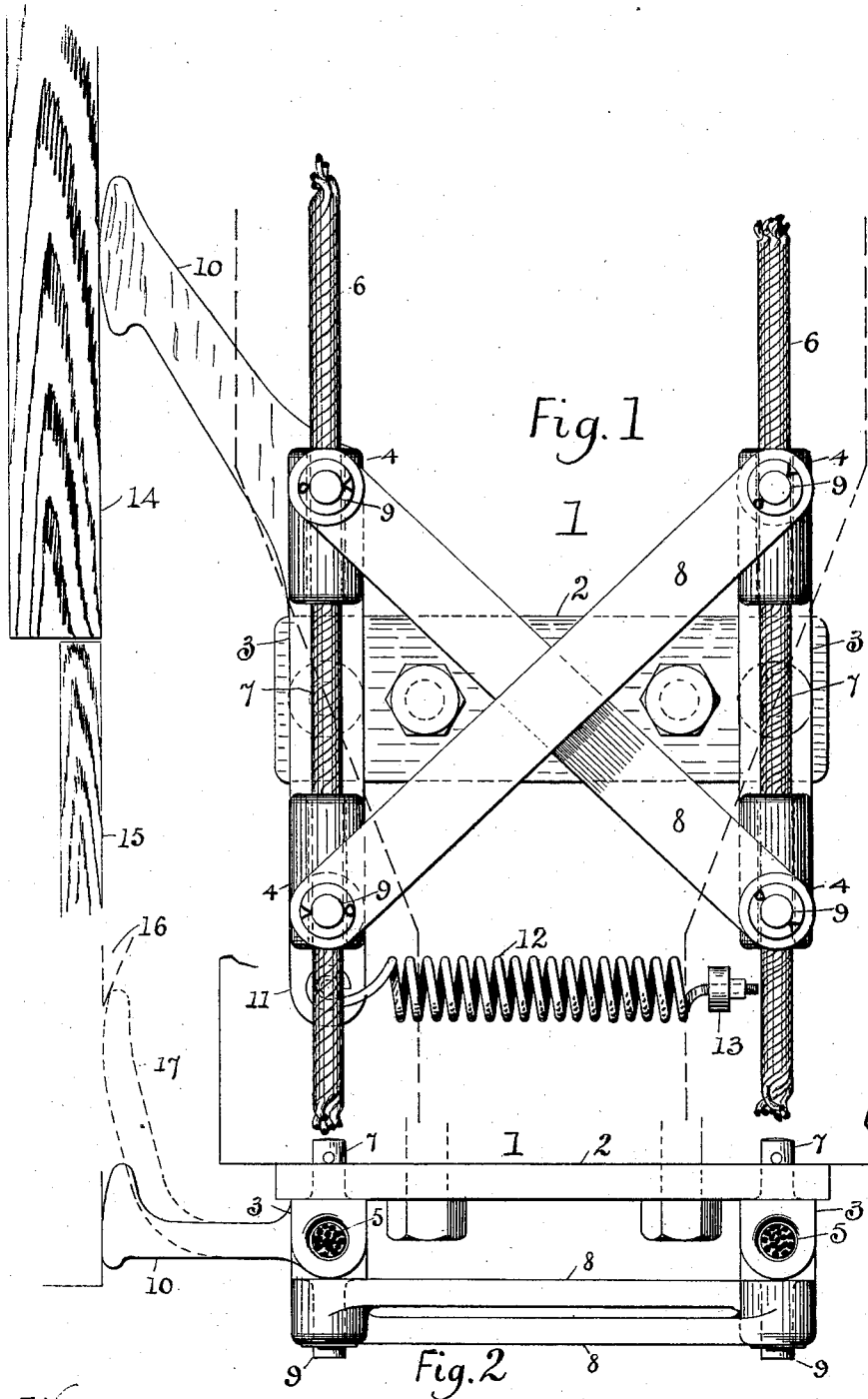


R. C. WRIGHT.
AUTOMATIC ELEVATOR CAR LOCK.

No. 566,109.

Patented Aug. 18, 1896.



WITNESSES:
Mark W. Collet
Wm. Hendrickson

INVENTOR
Ransom Albright

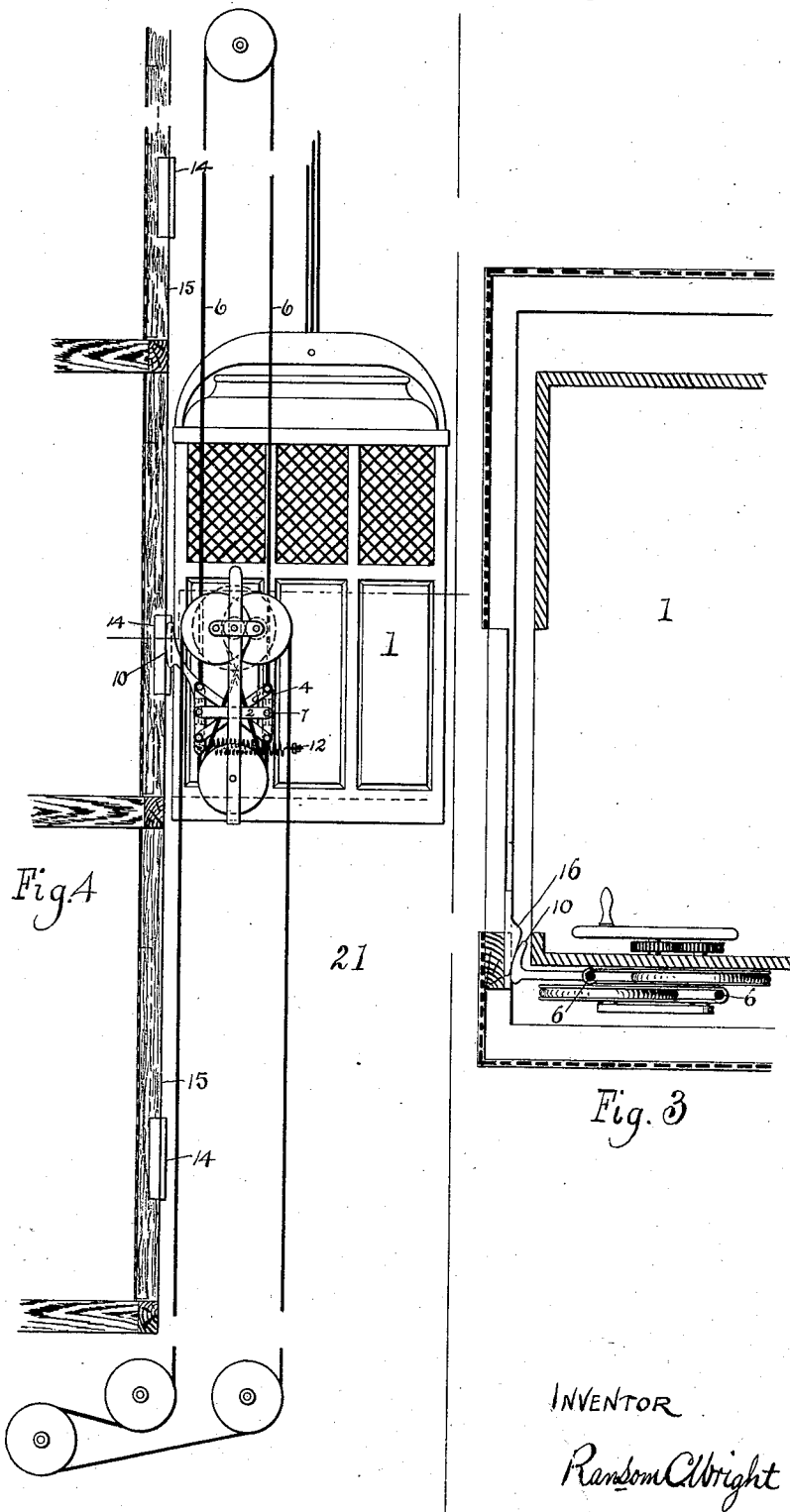
(No Model.)

2 Sheets—Sheet 2.

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H. Eye Jay.

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UNITED STATES PATENT OFFICE.

RANSOM C. WRIGHT, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR, BY
MESNE ASSIGNMENTS, TO THE ELEVATOR SAFETY CONTROLLER COM-
PANY, OF SAME PLACE.

AUTOMATIC ELEVATOR-CAR LOCK.

SPECIFICATION forming part of Letters Patent No. 566,109, dated August 18, 1896.

Application filed October 7, 1895. Serial No. 564,882. (No model.)

To all whom it may concern:

Be it known that I, RANSOM C. WRIGHT, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Elevator-Car Locks; and I do declare the following to be a full, clear, and exact description of the invention, such as 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 figures of reference marked thereon, which form a part of this specification.

The object of my invention is to hold immovable and secure the carriage or car used in elevators by an automatic device while any gate or door at the landing used for entrance to the car shall be open and to release same upon the closing of the door, the device being so arranged that the device is entirely out of the control of the operator and the carriage cannot be moved until the door is closed.

My invented device consists, essentially, of gripping mechanism or gripping device for the controller cable or cables, according as it is desired to apply the device to an elevator having a single controller-cable or pair or a multiple of them, or according as the gripping is to be applied to one or less than the whole number of controller-cables or to the whole of such cables, mechanism for using the gripping mechanism to grip the cable or cables which is in the preferred form of my device turning mechanism, and mechanism acting in opposition to said mechanism to cause said mechanism to release the cable, operated by the floor-doors either directly or by the interposition of means operated thereby.

Figure 1 is a side elevation of the gripping-device-turning mechanism and the adjacent parts. Fig. 2 is a plan view of same. Fig. 3 is a cross-section; and Fig. 4 is a side sectional elevation showing the floors and controller, controller-cables and having applied thereto my invented device.

A description of the mechanism of the best form of device of which I am now aware is as follows:

21 is a shaft of the ordinary description, in

which runs the car 1, and at the side of the shaft are the doors 14, which carry the bearing-strips hereinafter described. To the car is attached a controller of one of the usual or of any suitable form, (a wheel-controller being shown for illustration only,) which operates the controller-cables 6. To the sides of the car 1 is secured a frame 2, at the outer end of which are placed swiveling gripping devices 3, to which are attached the grippers 4, which surround cables 6.

The gripping devices are held centrally by the lug 7 to the frame 2 and are connected together by the links 8 on the lugs 9, which latter, in connection with the spring 12, secured at one end to the gripping device 3, forms the best form of turning device for the gripper devices of which I am now aware. The other end of the spring 12 is secured to the car or to an attachment thereon at 13. To this portion of my device is secured the operative devices forming means acting in opposition to the gripper-operating mechanism to cause the said mechanism to release the cable. This in the above-described form of my device consists of the arm 10, a portion of which forms a movable contact-head running upon the bearing-strips hereinafter described.

At 14 is the elevator floor-door leading into the shaft, one door being the usual practice of elevator construction at every landing, and at 15 is a bearing-strip forming a runway and running the length of the shaft and having a portion of its length carried by each of the floor-doors or formed thereby, forming the devices for controlling the movement of arm 10. The portion of the strip carried by or formed by the doors is moved out of the path of the arm 10, which will then be thrown outward by the action of the spring 12. The edge of the portion of the bearing-strip which is moved out of the way by the opening of the door is inclined or beveled at 16, so as to easily push the arm 10 back into place. In some cases it may be necessary to extend the arm 10 in front of the car, as shown at 17.

The operation of my device is as follows: When the car is running, the gripping device stands normally in line with the cable 6, and

this cable runs through the grippers 4 perfectly free and the head of the arm 10 runs on the bearing-strips uninterruptedly. When the car 1 is stopped at a landing and the door 14 slid to open the passage-way for ingress and egress, the arm 10 moves into the space just caused to be vacated by the sliding of the door, being forced by the spring 12. The gripping devices are turned and the grippers 10 grip the controller-cables, links 8 force the opposite gripping devices and grippers in a reverse direction to each other. Thus the controller-cables, the controller, and the car are held until the door is slid closed and the grippers released from the controller-cables.

Where only a single cable is to be gripped and held, the links 8 8 and one of the gripping devices 3 may be omitted.

Of course many forms of controller and controller-cables are used in the various forms of passenger-elevators; and, as my invention is not confined to any particular form of such devices, but can be applied to many forms of elevators, I do not limit myself to the use of particular form shown. Neither do I limit myself to the details of construction set forth in my specification, as changes can be made in the same by a mechanic of ordinary skill after reading my specification.

Having now described my invention, I claim and desire to secure by Letters Patent—

1. The combination, with the car, floor-doors, and controller-cable, of a gripping device placed upon and moving with said car, yieldingly-acting means for causing the gripping device to grip the controller-cable, and a runway extending the length of the elevator-shaft, sections of said runway being carried by said doors, and said runway being adapted to act in opposition to said yieldingly-acting means to cause said means to release the cable when the car is between floors and also at the floors as long as the doors are closed substantially as described.

2. The combination with the car floor-doors, and controller-cables and controller of grippers placed about and acting upon said cables, turning mechanism for said grippers and automatically-operating means acting in opposition to said mechanism to cause said mechanism to release the cable as the elevator-doors are opened and closed all substantially as described.

3. The combination in an automatic eleva-

tor-car-stopping device, of controller-cables provided with pairs of grippers set to turn and grip the said cables, link mechanism for causing the simultaneous turning of the grippers in opposite directions, all substantially as described.

4. The combination of a runway extending vertically along the elevator-well having sections thereof attached to the doors and movable therewith, the doors the car and controller-cable, grippers placed upon and acting upon said cable, automatic turning device for said grippers and a movable contact-head running on said runway and operatively connected to said gripper-moving mechanism, all substantially as described.

5. The combination of a pair of grippers placed around the cable and swiveling in opposite directions a spring acting to cause the swiveling of the grippers, a contact and a runway extending vertically along the well and having sections thereof connected to the doors and movable therewith, along which the contact travels, the floor-doors and cables passing through said thimbles substantially as described.

6. The combination of two pairs of swiveling grippers connected by links, a spring connected to cause to swivel said grippers, a vertical runway extending vertically of the elevator-well, sections thereof being attached to and moving with the doors, the floor-doors and cables passing through said thimbles and a movable contact-head running upon said runway and automatically connected to said grippers substantially as described.

7. The combination of the pair of grippers set upon a swiveling bar on opposite sides of the pivot on which it swivels, the spring secured to one end of said bar and the movable contact-head secured to the other, the floor-doors and runway and cables passing through said thimbles all substantially as described.

8. The combination with the controller-cable, of the bar 7 pivoted between its ends, and the grippers 4 at the ends of said lever adapted to embrace and inclose the controller-cable, substantially as described.

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

RANSOM C. WRIGHT.

Witnesses:

MARK WILKS COLLET,
GEO. W. REED.