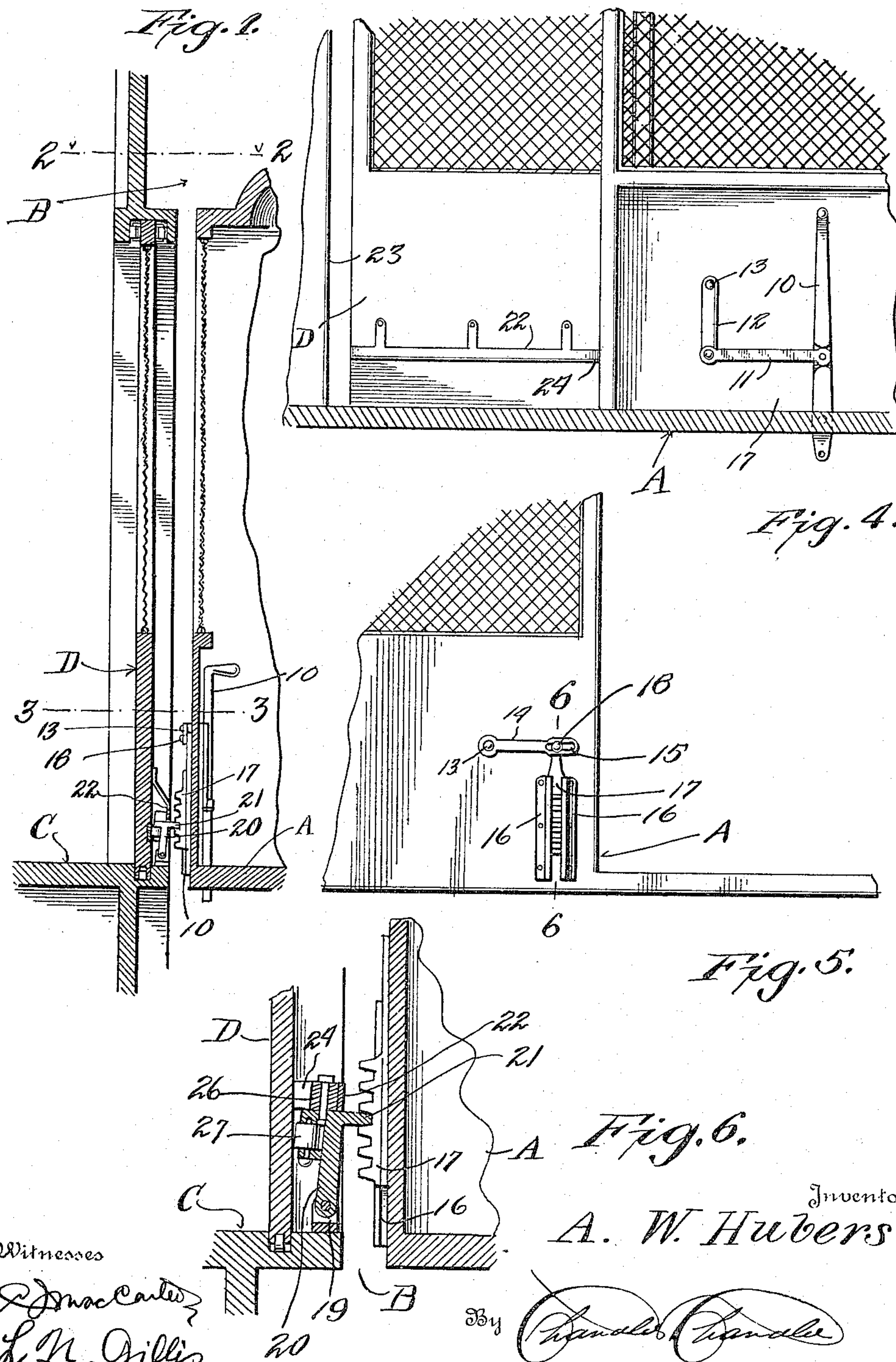


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A. W. HUBERS.
CONTROLLING MECHANISM FOR ELEVATOR CARS.
APPLICATION FILED NOV. 2, 1914.

1,155,065.

Patented Sept. 28, 1915.
2 SHEETS—SHEET 1.



Witnesses

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Fig. 2.

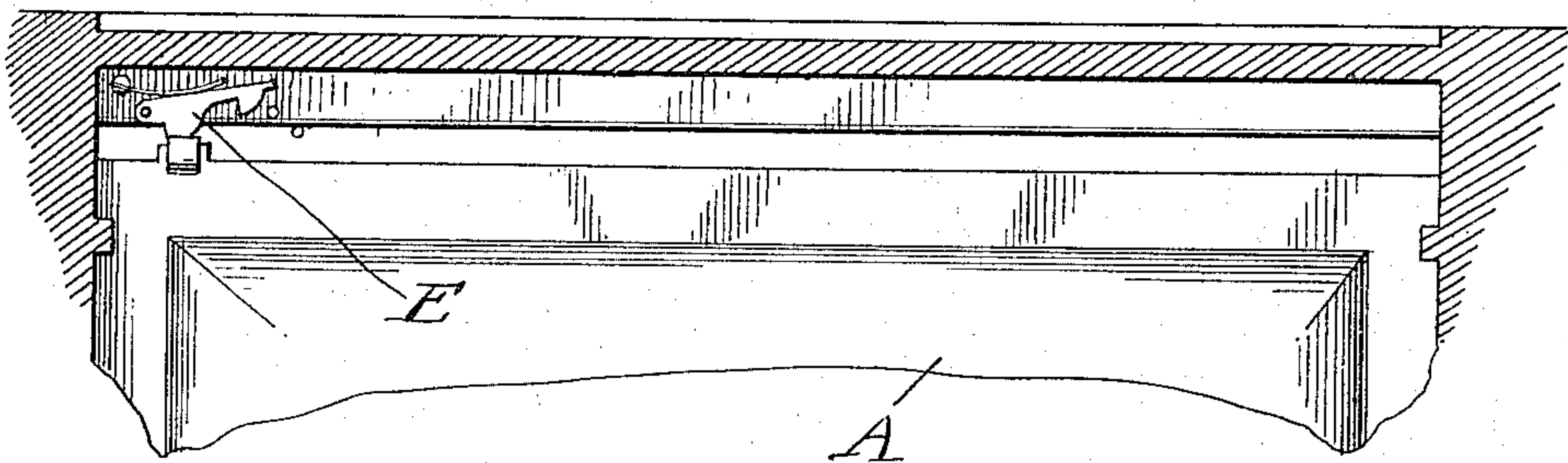


Fig. 3.

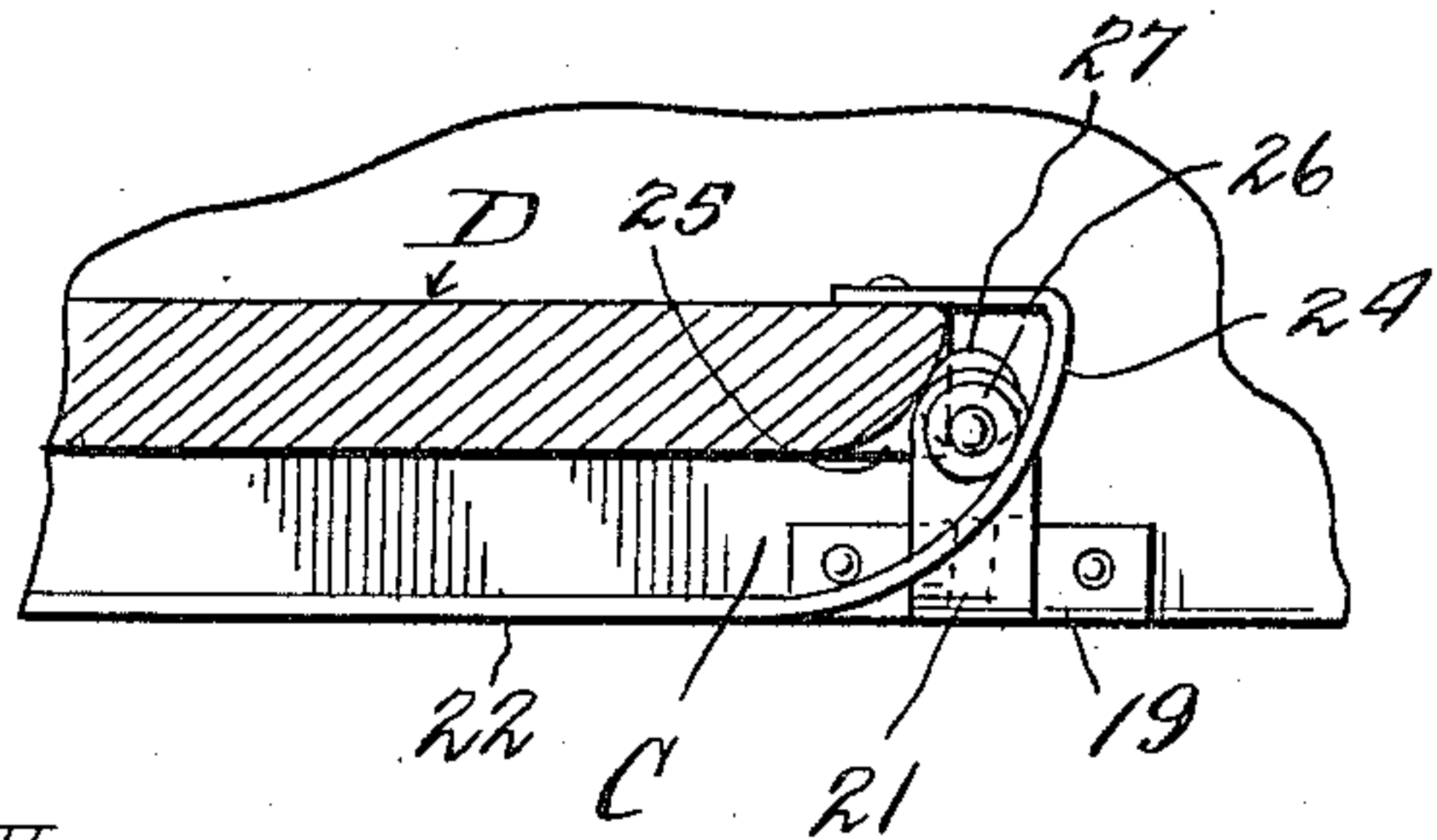
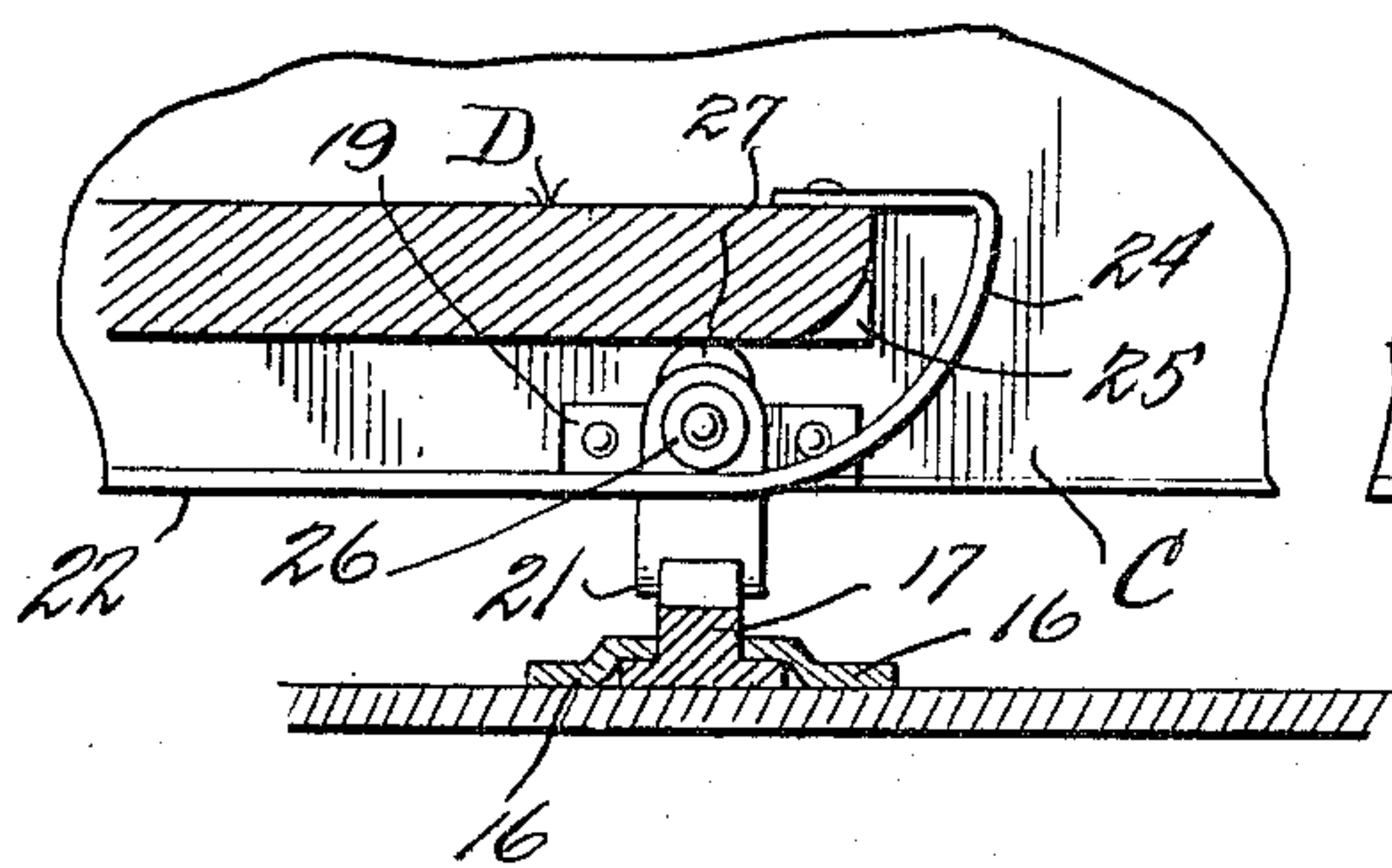
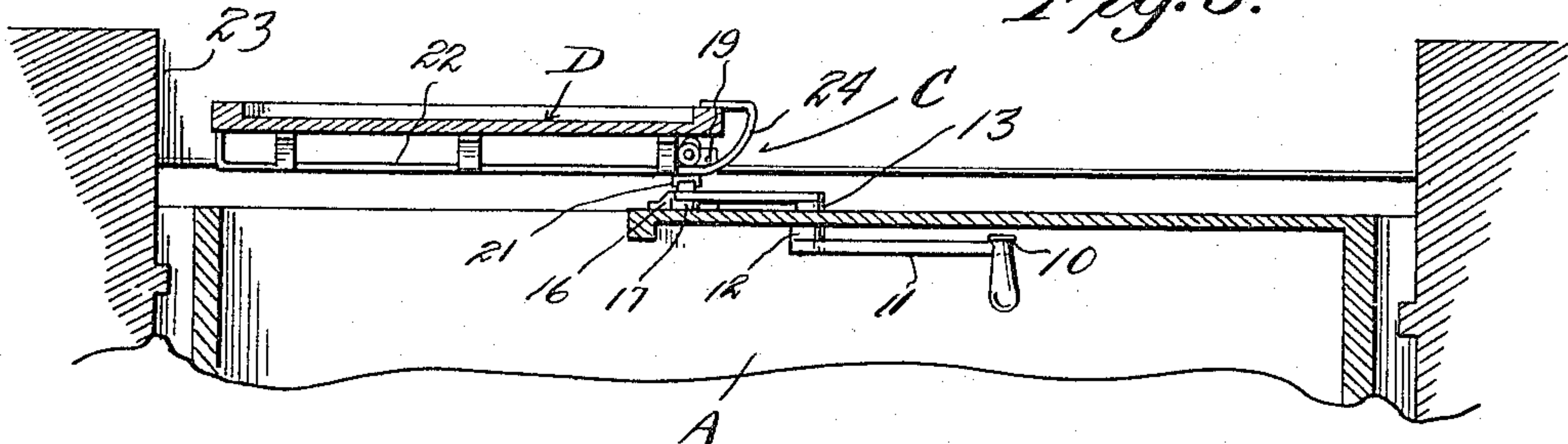


Fig. 8.

Fig. 7.

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UNITED STATES PATENT OFFICE.

ALBERT W. HUBERS, OF NEW YORK, N. Y.

CONTROLLING MECHANISM FOR ELEVATOR-CARS.

1,155,065.

Specification of Letters Patent.

Patented Sept. 28, 1915.

Application filed November 2, 1914. Serial No. 869,913.

To all whom it may concern:

Be it known that I, ALBERT W. HUBERS, a citizen of the United States, residing at New York, in the county of New York, State of New York, have invented certain new and useful Improvements in Controlling Mechanism for Elevator-Cars; and I do hereby 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.

This invention relates to controlling mechanisms for elevator cars and has special reference to an improvement on my prior patent for controlling mechanism for elevator cars No. 918,051, bearing the date April 13, 1909.

The principal object of the invention is to improve and simplify the mechanism illustrated in said prior patent so that by a simple means the controller lever will be locked against movement toward up or down position when the door at the landing at which the elevator car is stopped, is open, and will also prevent, or rather counteract, any up and down movement of the car due to "creeping."

In carrying out this improvement, I provide, at a convenient point upon the elevator car, a slidable element preferably in the form of a rack bar, which has operative connection with the controller lever within the car. I furthermore arrange at each landing, at any suitable point, a device including a detent which is operated upon opening of the door to engage with the slidable element above mentioned and lock it against movement, in this manner locking the controller lever against movement to up or down position. Not only do these instrumentalities perform the function stated, but, by the the reason of the fact that the rack element heretofore mentioned is slidable and operatively connected to the controller lever, any up or down movement of the car due to "creeping" will result in the controller lever being swung to position to stop the car.

With the above and other objects in view the invention consists in general of certain novel details of construction and combination of parts hereinafter fully described, illustrated in the accompanying drawings, and specifically claimed.

In the accompanying drawings, like char-

acters of reference indicate like parts in the several views, and:—

Figure 1 is a vertical section taken through a portion of an elevator car and a landing and door for such a car. Fig. 2 is a section on the line 2—2 of Fig. 1. Fig. 3 is a section on the line 3—3 of Fig. 1. Fig. 4 is a section through the elevator car looking toward the door. Fig. 5 is a view of a portion of the exterior of such a car. Fig. 6 is an enlarged detail section on the line 6—6 of Fig. 5, the section also showing a portion of the landing floor. Fig. 7 is an enlarged detail view in horizontal section showing a portion of the cam on the door and the car, the rack and detent being shown in engagement, the door in the position assumed when it is partly opened. Fig. 8 is a view similar to Fig. 7 but showing the position assumed by the detent when the door is closed.

In the drawing is illustrated a portion of an elevator car, indicated in general by the reference character A and there is also indicated a shaft B in which the car travels, the landing of the shaft being indicated in general by the reference character C and the door of this landing by the character D. The car is provided with the usual controller lever 10 which operates a controller of any type, the latter not being necessary here to be shown. This lever 10 is connected by means of a link 11 with a rock arm 12 on a rock shaft 13 which extends through that wall of the car adjacent the landings. This rock shaft 13 carries on its outer end a rock arm 14 which is provided adjacent its extremity with a slot 15. Mounted on the outside of the car beneath the rock arm 14 is a guide way 16 wherein slides a rack bar 17 which is connected to the arm 14 by means of a pin 18 passing through the slot 15. It will thus be seen that when the lever 10 is moved in one direction or the other the rack 17 will move up and down in the guide 16. It will be obvious that reverse the movement of the rack 17 up or down with reference to the car will cause movement of the lever 10.

Mounted on each landing is a bracket 19 whereto is pivoted a detent arm 20 provided on its end with a tooth 21 adapted for engagement with the rack bar 17 when the latter is in proper position. Secured to the door adjacent the bottom thereof is a guide strip 22 which has the end opposite

the door jamb 23 provided with the curved continuation as at 24, this curve forming a cam. Moreover this edge of the door is cut away to form an opposite portion of the cam as indicated at 25 so that the cam is in the nature of a groove or slot. Mounted on the detent arm 20 is a roller 26 which continually engages against the guide strip 22 while a similar roller 27, also mounted on the arm 20 engages against the surface of the door and the curved cut away portion 25. Thus as the door is opened and closed the detent assumes the true position shown in Figs. 7 and 8, Fig. 7 showing the position when the door is opened while Fig. 8 shows the position when the door is closed.

I also prefer to employ, in connection with this device, the door lock indicated at E in Fig. 2 and which forms the subject matter of my Patent No. 973,275 bearing the date October 18th, 1910.

In operation when the elevator arrives opposite the landing the person in charge of the elevator moves the lever 10 to its central position as indicated in Fig. 4. At this time the door lock E is released and the door may be opened. As the door is opened the detent moves from the position shown in Fig. 8 to the position shown in Fig. 7 and engages the rack 17. Now if the car operator attempts to move the lever 10 to one side or the other the engagement of the detent with the rack prevents such movement. Moreover if the car creeps upward the rack is prevented from moving upward therewith and the lever 10 is moved to the position assumed when the car is to be lowered. This causes the car to stop after the lever has moved to proper position, the lever moving slightly toward "down" posi-

tion as the car moves upward. It will be obvious that as the car creeps downward the reverse of this takes place, the lever moving to the upward position and again being restored to its central position.

There has thus been provided a simple and efficient device of the kind described and of the character specified.

It will be obvious that many minor changes may be made in the form and construction of this invention without departing from the material principles thereof. It is not therefore desired to confine the invention to the exact form herein shown and described, but it is wished to include all such as come properly within the scope claimed.

Having thus described the invention, what is claimed as new, is:—

The combination with an elevator car, an elevator shaft, and a landing door; a controller mounted on the car, a vertically movable rack bar slidably mounted on the car and connected to said controller, a detent pivoted to the elevator adjacent said landing door, a roller on said detent engaging the surface of said door, said door being provided with a cam portion, a guide strip carried by said door, and a second roller on said detent engaging the inside of said guide strip, whereby said detent is moved into and out of operative position as the door is opened and closed.

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

ALBERT W. HUBERS.

Witnesses:

JAMES J. MILLARD,
FRED M. HARRINGTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."