J. T. ALBERT.

SAFETY APPLIANCE FOR ELEVATORS.

APPLICATION FILED SEPT. 2, 1908.

936,285.

Patented Oct. 12, 1909.

Fig. 1.

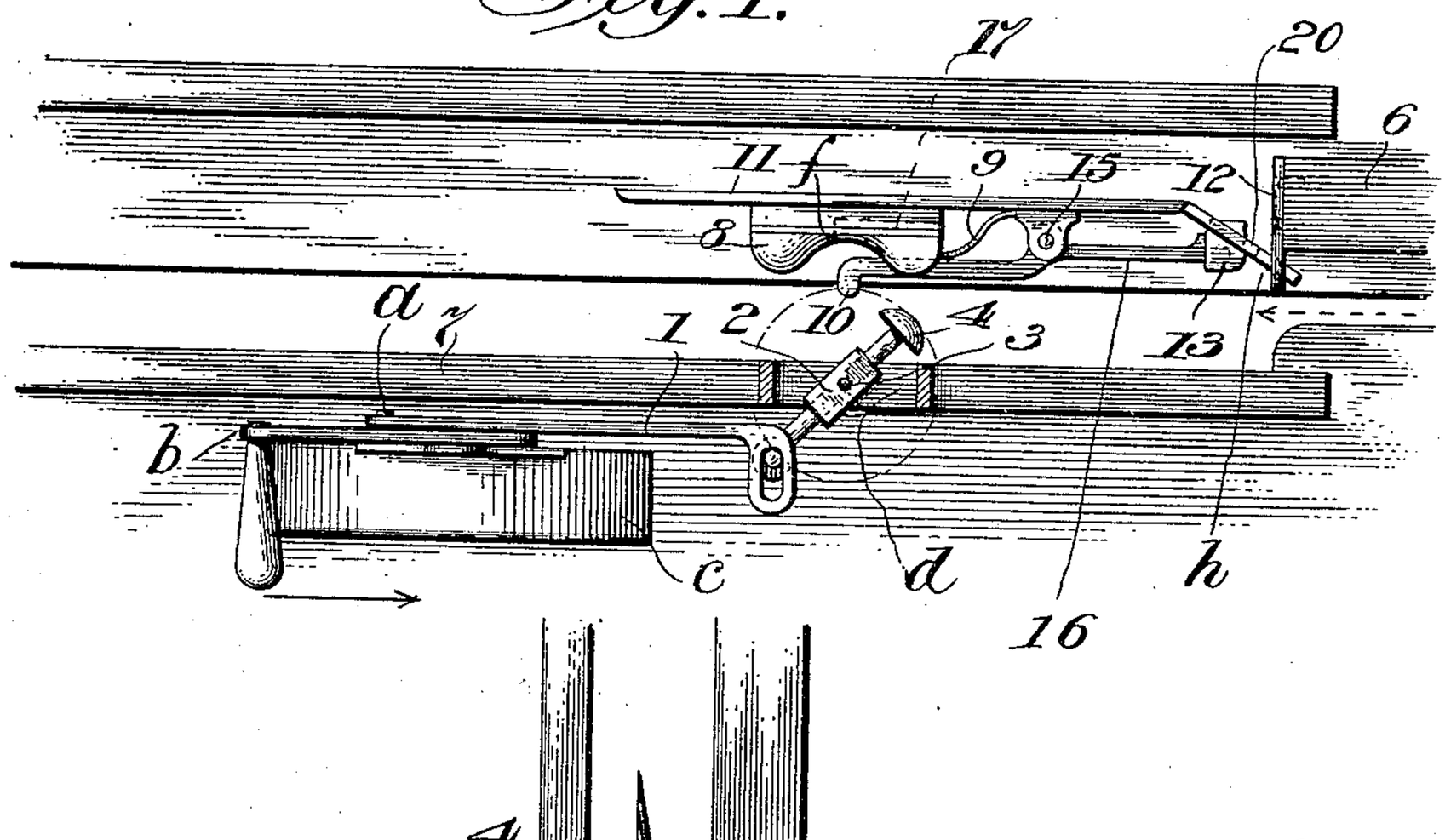
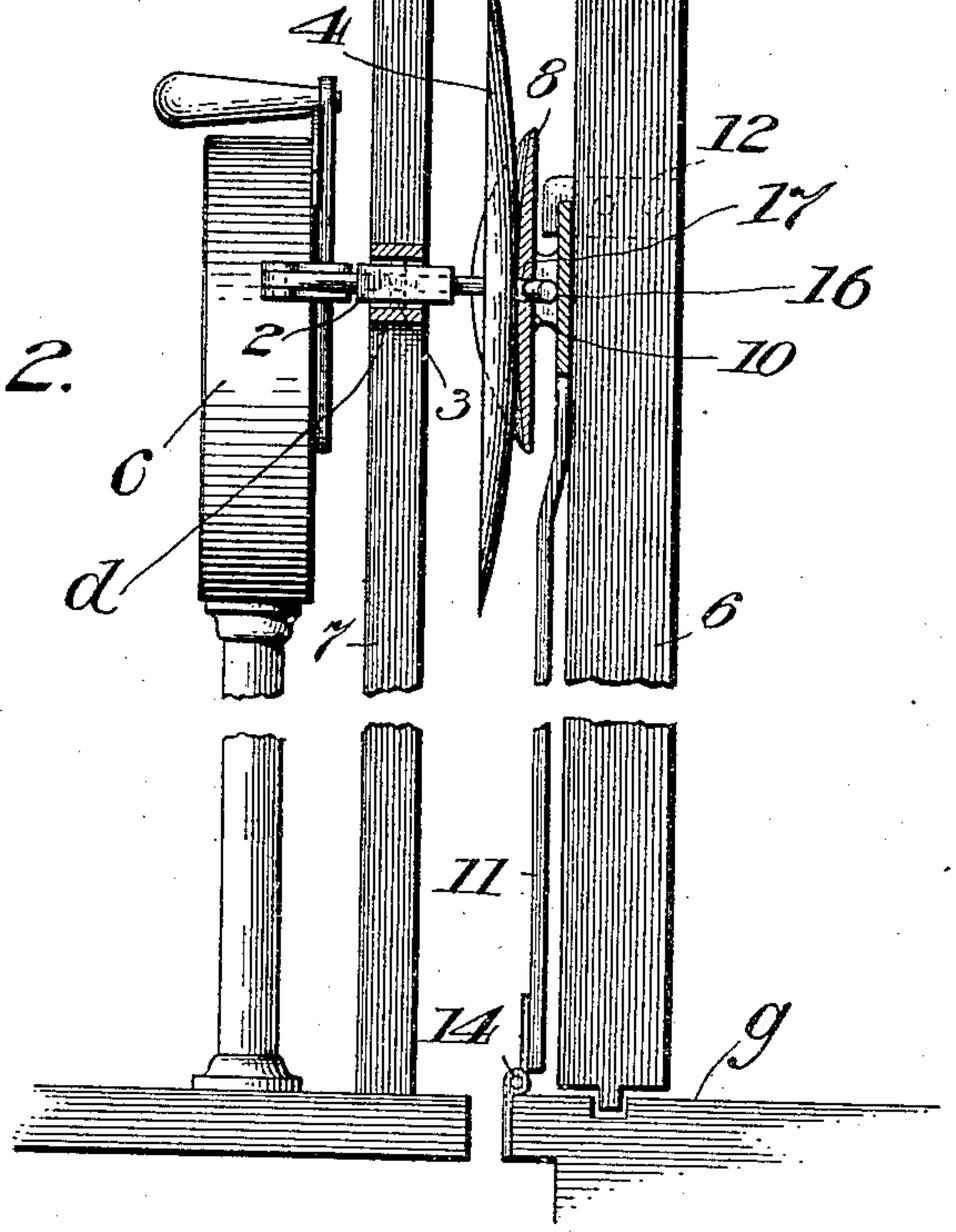


Fig. 2.



Witnesses:

H. Findlay French

Alberta Richards

Inventor:

Joseph Taylor Albert,

by G. H. & W. T. Howard,

Attys.

UNITED STATES PATENT OFFICE.

JOSEPH TAYLOR ALBERT, OF BALTIMORE, MARYLAND, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE UNIVERSAL SAFETY ELEVATOR LOCKING DEVICE CO., A CORPORATION OF MARYLAND.

SAFETY APPLIANCE FOR ELEVATORS.

936,285. Specification of Letters Patent. Patented Oct. 12, 1909.

Application filed September 2, 1908. Serial No. 451,435.

To all whom it may concern:

Be it known that I, JOSEPH TAYLOR ALBERT, of the city of Baltimore and State of Maryland, have invented certain Improvements in Safety Appliances for Elevators, of which the following is a specification.

In the description of the said invention which follows, reference is made to the accompanying drawing forming a part hereof, and in which,—

Figure 1 is a horizontal section of certain parts of the elevator cage, together with the sliding door on one of the floors of the building, illustrating the relative positions of the said parts when the sliding door is closed and locked. Fig. 2 is a vertical side of certain parts of the apparatus, shown in Fig. 1, some of which are represented in section, and illustrating the relative positions of the various parts when the motive power is cut off, and the sliding door open.

Referring now to the drawing, 1 is a bar pivoted at *a* to the handle *b* of the controller *c* situated within the cage, whereby the cage is put in motion, or stopped.

The outer end of the bar 1 is pivoted to a tumbler 2 which is centrally fulcrumed at 3 within a box *d* let into the wall 7 of the cage. The free end of the tumbler 2 is provided with a vertically tapered head 4 having a laterally rounded outer surface.

In the movement of the controller handle *b* in the direction indicated by the full arrow in Fig. 1, to the vertical position shown in Fig. 2, power to move the cage is cut off, and the tumbler 2 brought to a right angle with respect to the wall 7 of the cage and its head 4 directly in front of a central depression *f* in the block 8, adapted to receive the said head. The block 8 is secured to a plate 11 hinged at 14 to the floor *g* of the building, and adapted to be swung toward and from the wall 7 of the cage. In Fig. 1 the plate 11 is shown in its extreme backward, and in Fig. 2 in its extreme forward position.

The edge of the plate 11, to the right of Fig. 1, has an angular or inclined extension *h*, which passes through a slot in the plate 12 fastened to the edge of the sliding door 6 a portion only of which door is shown. The door 6 has to be slid in the direction indicated by the dotted arrow to give entrance to the cage.

16 is a locking lever pivoted at 15 to the plate 11. The inner arm of the said lever rests in a slot 17 (shown in full lines in Fig. 2) in the block 8, and is provided at its end with a finger 10 which is shown in both figures of the drawing. The outer arm of the locking lever 16 passes through a slot 20 (shown in dotted lines in Fig. 1) in the angular extension *h* of the vertical hinged plate 11, where it is provided with a stop 13 which, when the sliding door 6 is closed as shown in Fig. 1, is opposed to the edge of the said door, and locks the same and prevents its being opened. The locking lever 16 is yieldingly held in position, by means of a spring 9.

Supposing the various parts of the apparatus to be in the relative positions shown in Fig. 1, it will be seen that the cage can be elevated or lowered, but the sliding door being locked by the stop 13 of the locking lever 16, cannot be opened; but should the motive power be cut off by changing the handle *b* of the controller *c* from the horizontal position shown in Fig. 1 to the vertical position illustrated in Fig. 2, the tumbler 2 will be turned and brought to a right angle with respect to the wall 7 of the cage, and its head 4 brought opposite to or in vertical alinement with the depression *f* in the block 8 on the hinged vertical plate 11. As the cage 7 in moving upward or downward reaches any floor of the building having a sliding door provided with the elements of the safety appliances described, and the motive power shut off, the tapered head 4 of the tumbler 2 will engage the finger 10 of the locking lever 16, but not communicate such movement to the lever as to affect or interfere with its locking function. In opening the sliding door 6 to give entrance to the cage, the slotted plate 12 first traverses the angular extension 20 of the vertical hinged plate 11, and by the time that it has reached the straight or main portion of that device, the plate 11 will have been thrown forward carrying with it the block 8, and the locking lever 16. The finger 10 of the locking lever being in contact with the head 4 of the tumbler 2, the said lever does not receive a motion in common with the vertical hinged plate 11 and its block 8 but is tilted and its stop 13 removed from the path of the sliding door 6, and therefore that device does not offer any obstacle to the full

and complete opening of the door, or the closing of the same.

It will be understood that in the opening of the sliding door as described, the head 4 of the tumbler 2 enters the depression *f* of the block 8, consequently the handle *b* of the controller *c* cannot be restored to its original position and the cage set in motion, until the door has been closed in which operation the hinged plate 11 is restored to its original position or that shown in Fig. 1 and the stop 13 of the locking lever 16 is again brought into locking position.

I claim as my invention,—

1. An elevator cage, a motion controller situated within the cage having an operating handle, a tumbler fulcrumed in the wall of the cage and adapted to extend outwardly therefrom, a device to actuate the tumbler from the handle of the controller, a vertical hinged plate situated exteriorly of the cage, having a fixed position, a sliding door on a floor of the building, and locking mechanism for the tumbler, and a stop for the sliding door both of which are carried by the hinged plate, combined with an appliance attached to the sliding door which in the opening of the door, throws the sliding plate and the locking and stop mechanism toward the cage, whereby the former cooperates with the tumbler to lock the controller and the latter is moved from the path of the sliding door, substantially as specified.

2. An elevator cage, a motion controller situated within the cage having an operating handle, a tumbler fulcrumed in the wall of the cage, a device to actuate the tumbler from the operating handle of the controller, and a sliding door placed exteriorly of the cage, combined with a vertical hinged plate having a fixed position, an appliance secured to the sliding door whereby in the opening and closing of the same, the vertical plate is made to move toward and from the cage, and stop mechanism carried by the said plate adapted to coöperate with the tumbler as the motive power is cut off, and thereby render the stop mechanism inoperative in the initial movement of the door in the opening operation, substantially as specified.

3. An elevator cage, a motion controller situated within the cage having an operating handle, a tumbler pivoted in the wall of the cage with its outer end projecting outwardly therefrom, and a bar which connects the operating handle with the inner end of the tumbler, the arrangement of the said parts being such that upon the stoppage of the cage, the outward projection of the tumbler is increased, combined with a hinged vertical plate having a fixed position and susceptible of a swinging movement toward and from the wall of the cage, a block secured to the hinged plate having a depression therein adapted to receive the projecting end of the tumbler and thereby prevent its movement, and that of the controller handle, means to effect the swinging movement of the vertical plate carrying the recessed block primarily derived from the sliding door, and a locking lever having a stop for the door, which receives its unlocking motion through the medium of the tumbler in the swinging movement of the vertical hinged plate, substantially as specified.

JOSEPH TAYLOR ALBERT.

Witnesses:
CHAS. C. EYLER,
JOHN H. HENKUS.