(No Model.)

H. R. TRACY.

ELEVATOR.

No. 434,849. Patented Aug. 19, 1890.

Fig 1

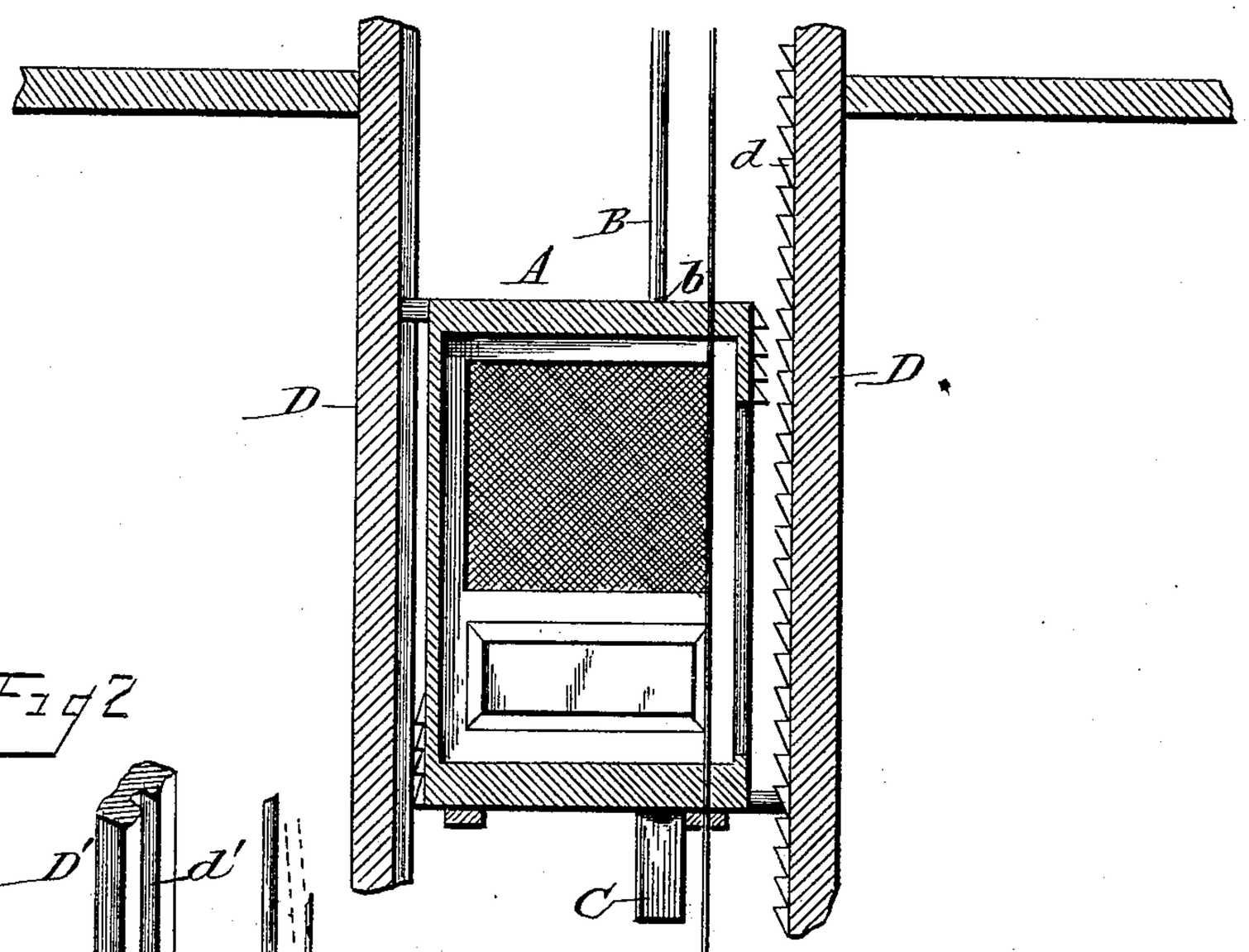


Fig 2

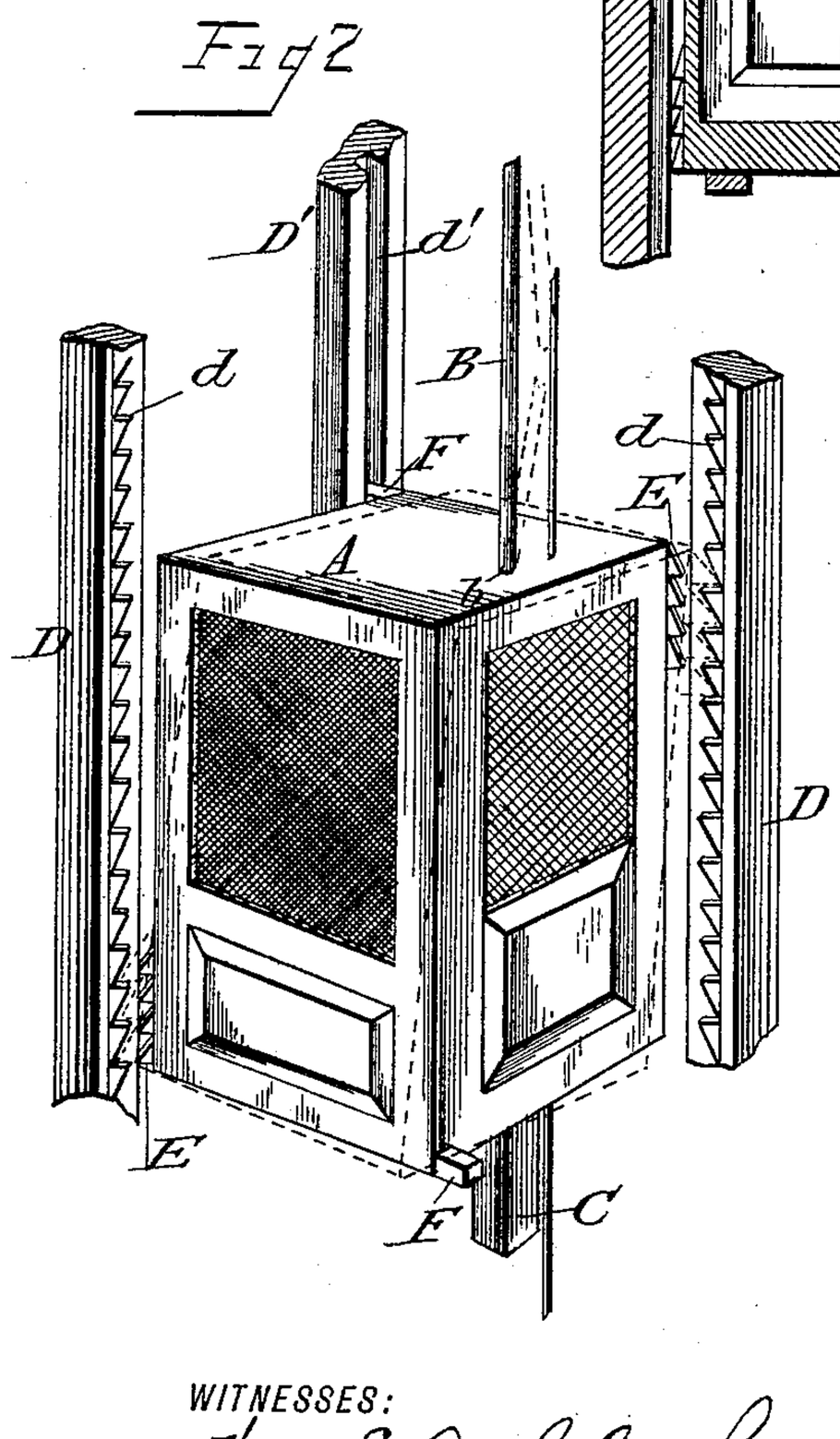
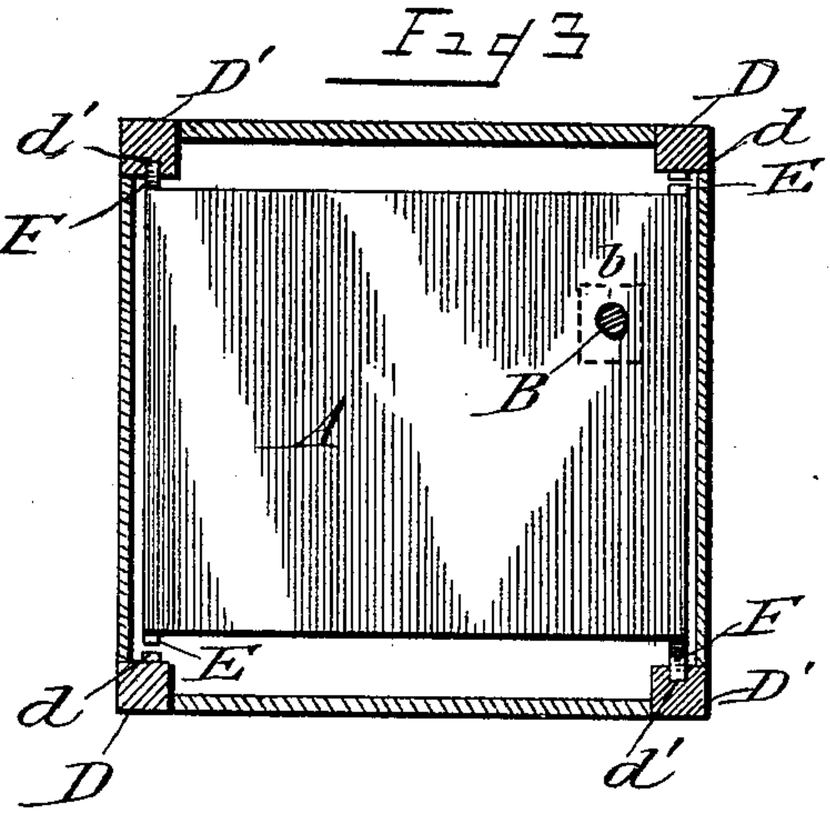


Fig 3



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HARRIET R. TRACY, OF NEW BRIGHTON, NEW YORK.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 434,849, dated August 19, 1890.

Application filed December 4, 1889. Serial No. 332,583. (No model.)

To all whom it may concern:

Be it known that I, HARRIET RUTH TRACY, a citizen of the United States, residing at New Brighton, in the county of Richmond and State of New York, have invented certain new and useful Improvements in Elevators; 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 elevators.

The object of the invention is to produce an elevator of such construction as absolutely to avoid injury to the car or danger to the occupants in case of the breaking of a support or of the too rapid descent of the car.

With this object in view the invention resides, essentially, in an elevator comprising a car centrally or eccentrically supported, the car being weighted—that is, pressed or drawn above or below at a point removed from the center, and capable of side or tilting movement, either to cant it to catch or to bring it to the perpendicular to catch—whereby should the hoisting rope part or the elevator-car begin to descend with a speed that might endanger the safety of the car or its occupants the descent will, by the action of gravity, instantly be checked, without allowing the car to attain any great degree of headway, and without imposing any undue strain on the guideways of the elevator.

The invention furthermore resides in an elevator comprising a car supported at a point removed from the center, provided on one side with a weight, and capable of side movement.

The invention furthermore consists in an elevator comprising a car supported at a point removed from its center, suitable guideways between which the car is allowed movement, uprights having toothed racks, there being corresponding racks on the car free from the racks on the ways when the car is in its normal position for operation, and engaging the bars when it is in an abnormal position for operation, whereby the downward movement of the car is stopped.

The invention furthermore resides in novel details of construction shown, whereby the objects of the invention are attained.

I have illustrated one embodiment of the invention in the accompanying drawings, in which—

Figure 1 is a sectional view representing an elevator-car eccentrically supported, weighted below, normally perpendicular in operation, and to be canted to catch. Fig. 2 is a view similar to Fig. 1, showing in dotted lines the car in the position assumed in case of the breaking of the supporting-rope or of the too rapid descent endangering injury to the car or to the occupants; and Fig. 3 is a plan view of my improved elevator, the uprights and the beams to which they are attached being shown in section.

In the drawings, A represents the car, which is so constructed that when it is properly sustained by its hoisting-rope the roof and floor will be horizontal. The hoisting rope or cable B of the elevator is attached to the car-top at a point *b*, removed a suitable distance from the center of the car.

Arranged beneath the car, or at the side to which the rope is attached, is a weight C, tending to hold the car normally at a true vertical position while the weight of the car is sustained by its hoisting rope or cable, but acting to incline the car at once should it be freed from its hoisting-rope by reason of the breaking of the latter, or should the car descend more rapidly than its hoisting-rope.

The car is desired to slide up and down between uprights D D and D′ D′. Upon each upright D is a toothed rack *d*, the teeth whereof are horizontal on their upper and slanting on their lower faces. In each upright D′, which is practically a guide, is a longitudinal groove *d′*.

Arranged at an upper and lower diagonally-opposite edge of the car is a toothed rack E, the teeth whereof are horizontal on their lower and slanting on their upper faces, and the car is set in the uprights in position with the racks on the car adjacent to the racks on the uprights. By the set of the teeth on the car passage of the car upward is permitted, even though the racks on uprights and car be in contact; but when the car is passing downward, should the respective racks come into contact, the car will at once be arrested.

Arranged at an upper and lower diagonally-opposite corner of the car, on the remain-

ing edges which have no racks, is a projection F. Each projection slides in a groove *d'* of the guides D'.

In the operation of the device, should the car become separated from the rope or cable or descend so rapidly as not to be held in the proper position by its supports, the car will be canted by reason of the weight, which renders the side of the car to which it is attached heavier than the opposite side. This movement will bring the two tracks E at once into contact with the racks on the uprights D, and the car will be instantly checked, thus avoiding any danger of injury.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An elevator-car provided at one side with a supplemental weight adapted to tilt the car should the same descend too rapidly.

2. An elevator-car having its hoisting-rope connected thereto at a point removed from the center of the car, the car being capable of side movement, substantially as described.

3. An elevator-car having its hoisting-rope connected to it at a point removed from the center, the car being provided at one side with a weight, and being capable of side movement, substantially as described.

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

HARRIET R. TRACY.

Witnesses:
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