

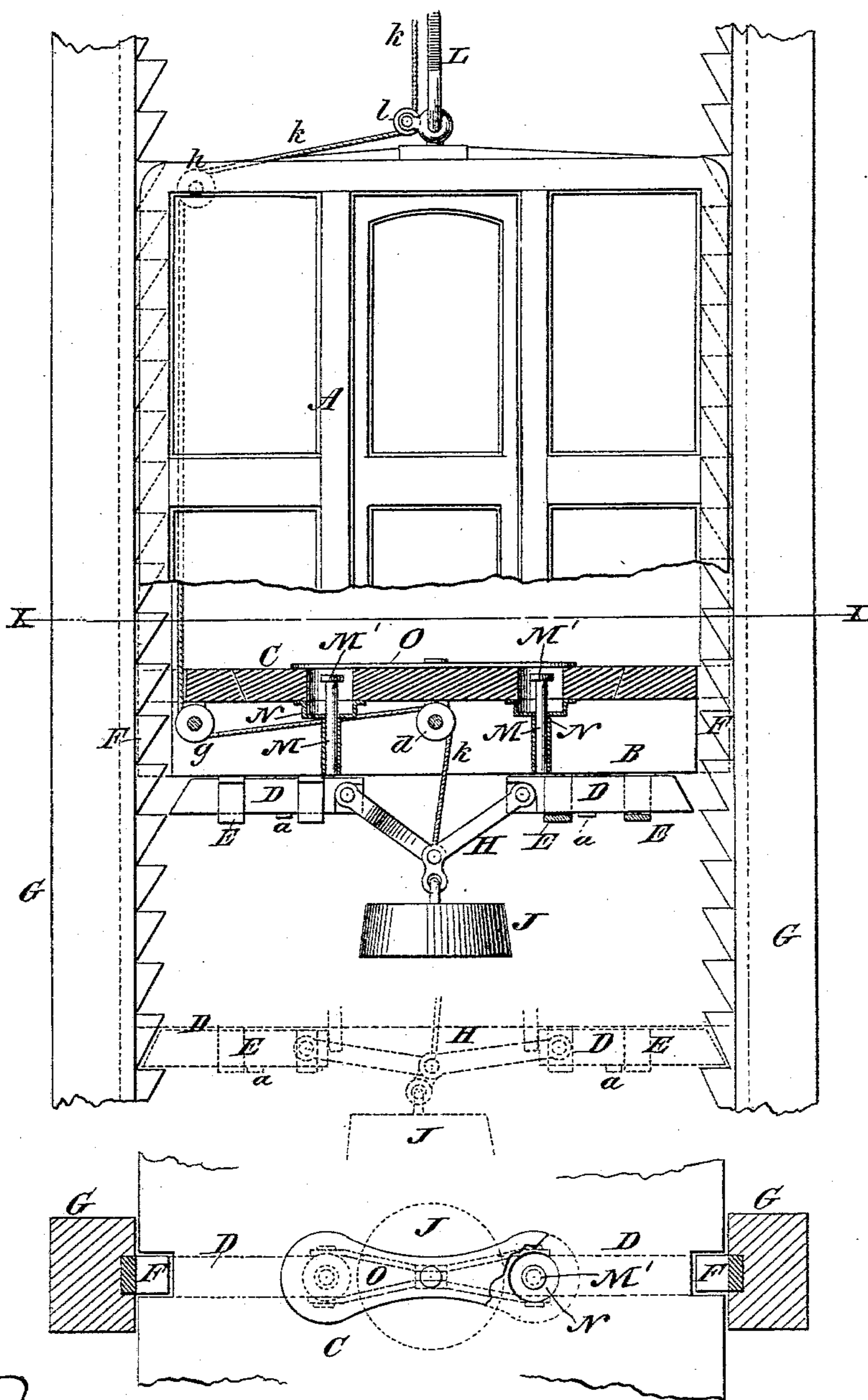
(No Model.)

F. A. WEEKS.  
SAFETY CATCH FOR ELEVATORS.

No. 300,541.

Patented June 17, 1884.

*Fig. 1.*



*Fig. 2.*

~~WITNESSES:~~

WITNESSES:  
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# UNITED STATES PATENT OFFICE.

FRANK ARTHUR WEEKS, OF ENNISKILLEN, ONTARIO, CANADA.

## SAFETY-CATCH FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 300,541, dated June 17, 1884.

Application filed February 9, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK A. WEEKS, of Enniskillen, Province of Ontario, Dominion of Canada, have invented a new and Improved Safety-Catch for Elevators, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved safety-catch for elevators, for the purpose of automatically locking and holding the elevator-car in place in case the hoisting-cable breaks.

The invention consists in the construction and arrangement of parts, as will be hereinafter fully described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a front elevation of an elevator-car provided with my improved safety-catch, parts being broken out and others shown in section. Fig. 2 is a sectional plan view of the same on the line *x x*, Fig. 1.

The elevator-car A is provided with a false bottom, B, or frame below the bottom C, and on the under side of the false bottom D two sliding locking-bolts, D, are held by clips E or otherwise, to slide in opposite directions, the outer ends of the sliding bolts D being beveled to fit on the teeth of the racks F, held on the upright guide-posts G, between which the car A moves. The inner ends of the sliding bolts D are connected by a toggle-joint, H, from the middle hinge of which a weight, J, is suspended, which draws the bolts D toward each other. Each bolt D is provided on its bottom edge with a check-lug, *a*, to limit the movements of the bolts in either direction by coming in contact with the clips E. A rope or cable, *k*, fastened to the middle hinge of the toggle-joint H, passes over a pulley, *d*, on the under side of the bottom C, under the pulley *g*, and over pulley *h* on the bottom and top of the car, respectively, and under the pulley *l* on the middle of the top of the car. The rope or cable *k* is wound on the same drum with the hoisting-cable L or on another drum. Two

vertical locking-pins, M, are held in upright casings N, projecting downward from the bottom C, the said pins having heads M' on the upper end, and the said pins rest on the inner ends of the bolts D. A plate, O, pivoted in the upper surface of the bottom, covers the apertures in the floor leading to the casings N and pins M. The weight of the block or weight J must be greater than the weight of the bolts D and the safety rope or cable *k*, so as to keep the bolts D withdrawn when the car ascends—that is, when the cable *k* is being wound on its drum.

The operation is as follows: Ordinarily the bolts D are held from the racks F by the weight J. If the hoisting-cable L breaks, all the strain will be on the safety-rope *k*, which pulls the middle of the toggle-joint H upward, thereby forcing the sliding bolts D outward and engaging their outer ends with the teeth of the rack F, thus locking the car in place and preventing it from dropping. If the bolts D are pushed outward, the inner ends of the bolts will be moved from under the locking-pins M, which drop down behind the inner ends of the bolts D and prevent the weight J from drawing the bolts D toward each other in case the safety-rope also breaks. If the car is to be released, the plate O is turned to permit access being had to the locking-pins N. The said pins N are raised, and the safety-rope is slackened to permit the weight J to draw the bolts D toward each other.

The device operates automatically, but can also be operated by a person in the car by pulling the safety-rope *k*.

If desired, the sliding bolts can be arranged on the under side of the top of the car. In place of the weight for operating the bolts, a spring can be used.

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

1. The combination, with an elevator-car, of sliding bolts held on the under side of the car, a toggle-joint uniting the inner ends of the sliding bolts, a weight suspended from the middle of the toggle-joint, locking-pins resting on the sliding bolts, and of a rope or

chain for raising the weight and middle of the toggle-joint to force the sliding bolts outward, substantially as herein shown and described.

- 5 2. The combination, with an elevator-car, of the sliding bolts D, the toggle-joint H, uniting the inner ends of the same, the casings N, the locking-pins M in the same, the

weight J, suspended from the toggle-joint, and the safety-rope k, substantially as herein shown and described.

FRANK ARTHUR WEEKS.

Witnesses:

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