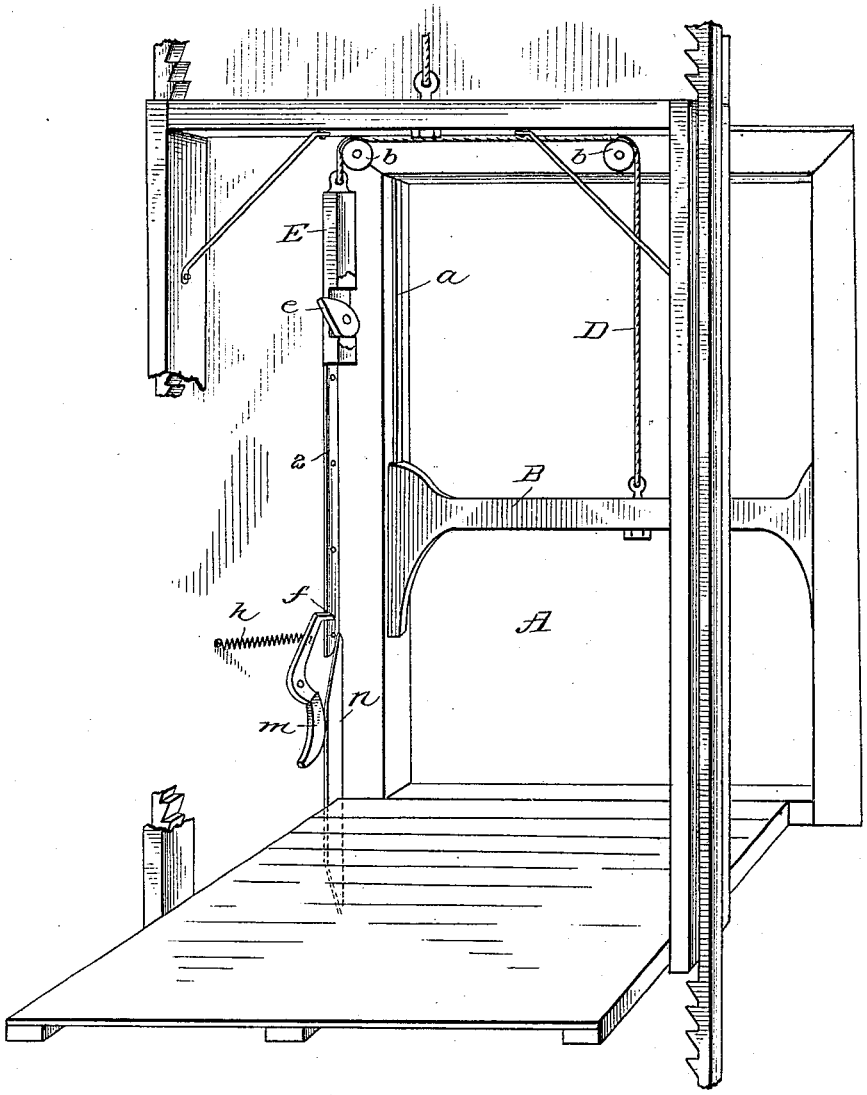
(No Model.)

C. H. VINCENT.

ELEVATOR.

No. 262,154. Patented Aug. 1, 1882.

Fig. 1.



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UNITED STATES PATENT OFFICE.

CHARLES H. VINCENT, OF LYNN, MASSACHUSETTS, ASSIGNOR TO WM. A. S. SMYTH AND WM. H. HODGDON, BOTH OF SAME PLACE.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 262,154, dated August 1, 1882.

Application filed May 1, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. VINCENT, of Lynn, in the county of Essex and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Elevators, of which the following, taken in connection with the accompanying drawing, is a specification.

This invention relates to an improvement in elevators, and has for its object to provide means for guarding the hatchways of elevators, so as to prevent the happening of accidents by persons falling down the elevator-well.

The invention consists in peculiar mechanism for locking and releasing a gate, sliding in the opening or entrance to the lift or platform, and in the various combinations of the operative parts of such mechanism—all hereinafter explained.

In the accompanying drawing is represented a rear perspective view of an elevator with my improved attachment applied thereto.

The elevator itself and its operative mechanism may be constructed in the ordinary and usual manner.

Across the opening A, which leads from the elevator to the room in the building, is arranged the gate or bar B, which bar B is permitted to slide vertically on suitable ways, *a a*, in an obvious manner. Attached to the bar B is a cord, D, that, passing over the pulleys *b b*, holds suspended from its opposite end the block E. The weight of the block E should be slightly less than the weight of the bar B, so that when the block is released, as hereinafter described, the bar will gravitate slowly downward to its position across the center of the opening A. Any upward or downward movement of the bar is obviously attended by an obverse downward or upward movement of the block E, which block is provided with a latch or pallet, *e*, pivoted therein, and the block is arranged to slide along the vertical rod or way 2, whereby it is kept in proper position to insure the engagement of the pallet *e* with the pawl *f* when the bar B is sufficiently elevated, as referred to hereinafter.

The spring *h* has one end secured to the side of the elevator-well, and connects at its opposite end with the pawl *f*. Said pawl is pivoted to the side of the elevator-well, and is provided with a cam-leaf, *m*, that engages with a cam-plate, *n*, on the elevator-car in such manner as to throw forward the pawl *f*, when the elevator-car reaches that point, and thereby bring the pawl *f* into position to engage with the pallet *e* when the bar B is raised.

In operating this my improved safety attachment, the elevator-car is stopped directly before the opening A, in which position the cam-plate *n* bears against the cam-leaf *m*, and thereby throws forward the pawl *f*, whereupon the operator places one hand upon the bar B and pushes it upward, thereby depressing the block E until the pallet *e* passes under the end of the pawl *f*, which prevents the descent of the bar B until the pawl *f* is drawn back to release the pallet *e*. The car having been loaded or unloaded, as occasion requires, it may be started upward or downward to some other story of the building, and when the car has moved sufficiently in either direction to carry the plate *n* away from the cam-leaf *m* the spring *h* will operate to pull backward the pawl *f*, thereby releasing the pallet *e* and allowing the bar B to gravitate downward to its position across the opening A.

From the foregoing it will be evident that by means of this my improved safety attachment the opening leading to the elevator-well is securely guarded at all times, except when the elevator-car is at that point. It is easily operated, and sufficiently automatic to insure against carelessness on the part of the operator.

What I claim as new, and desire to secure by Letters Patent, is—

1. The sliding gate B and suspended block E, in combination with a spring-catch adapted to engage with the said block, and a releasing device carried by the lift or platform.

2. The combination of the gate B, the suspended block E, having pallet *e*, the spring-pawl attached to the side of the well, and the cam *n* on the platform or lift.

3. In combination, the vertically-movable

block E and pallet *e*, pivoted therein, the pawl *f*, attached to the side of the elevator-well, a device carried by the elevator-car, adapted to engage with the said pawl when the elevator reaches that point and push it forward to engage with the pallet *e* when the block is depressed, substantially as and for the purposes described.

4. In combination, the spring *h* and pawl *f*, the movable gate or bar B, and intermediate connecting devices, substantially as described, adapted to engage with the pawl and hold the bar suspended, as described, and a device carried by the elevator-car, whereby upon the departure of the car from that point the spring *h* is caused to operate a release of the said bar, substantially as described.

In testimony whereof I have signed this specification in the presence of two witnesses.

CHARLES H. VINCENT.

Witnesses:
C. B. TUTTLE,
W. A. S. SMYTH.