(No Model.)

C. F. DÉ ARDEN.

DEVICE FOR OPERATING GATES TO ELEVATOR WELLS.

No. 494,126. Patented Mar. 28, 1893

Fig. 1.

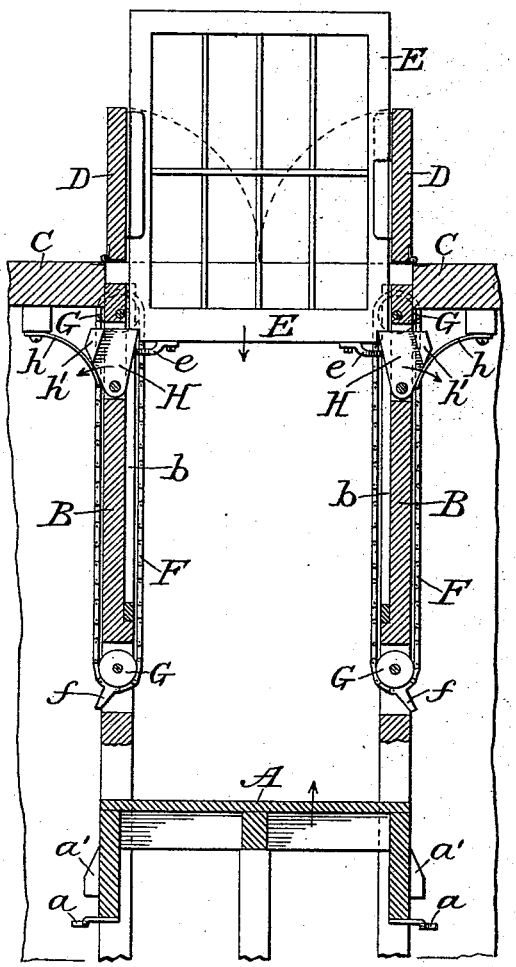
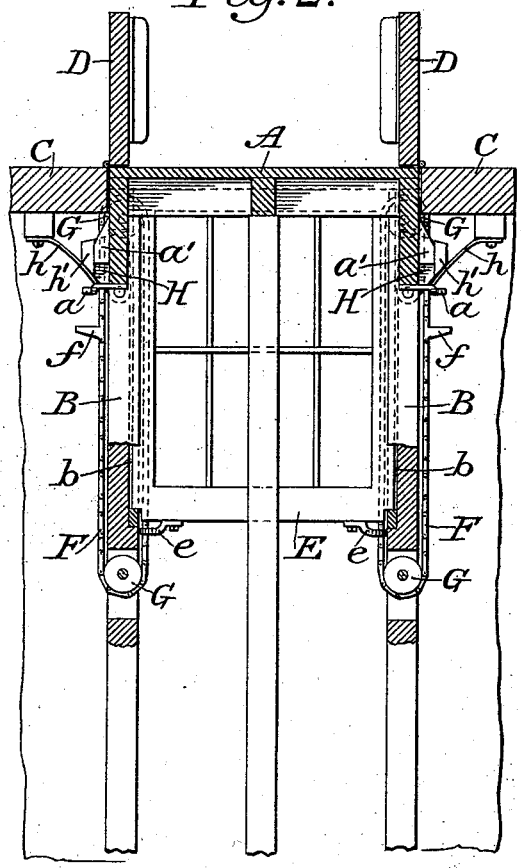


Fig. 2.



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UNITED STATES PATENT OFFICE.

CHARLES F. DÉ ARDEN, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO CORNELIUS B. PARKER, OF SAME PLACE.

DEVICE FOR OPERATING GATES TO ELEVATOR-WELLS.

SPECIFICATION forming part of Letters Patent No. 494,126, dated March 28, 1893.

Application filed July 12, 1892. Serial No. 439,797. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. DÉ ARDEN, of the city, county, and State of New York, have invented a new and useful Improvement in Devices for Operating Gates to Elevator-Wells; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates particularly to means for operating the sidewalk gates for a basement elevator, that is, an elevator which does not rise above the level of the sidewalk or floor above which the gate must be raised.

My object is therefore to provide means for operating such gates by the movement of the elevator car and further to cause such gate to begin to rise the instant the elevator begins to descend and provide for the retaining of the gate in position until the elevator has risen to the level of the floor or sidewalk.

My invention consists in the construction and arrangement of parts as hereinafter described and claimed.

In the drawings: Figure 1 is a vertical section, through the elevator shaft, on an irregular plane, showing the gate raised and the elevator car down. Fig. 2 is a similar section, but on a different irregular plane and showing the gate down and the car at the level of the floor or sidewalk.

The car A and guides B between which it moves may be as usual or as preferred, the car being shown as one of the class above referred to wherein the lifting force is applied beneath the car. The opening of the floor or sidewalk C may be closed when the elevator is not in use by the usual hinged doors D, D.

The gate E is so placed as to stand between the doors D when the doors are closed and is adapted to slide freely up and down in suitable ways *b*, *b*, which may be formed in the guide-posts B, B. Each side of the gate is secured by a suitable hook *e* to one of a pair of endless chains F, F, which travel freely over suitable pulleys G, G, each of said chains having a fixed finger or stud *f*. To each side of the car A is fixed a finger *a* which moves in the same vertical path with the corresponding finger of the respective chain F.

The gate is supported in its highest position by latches H, H, which may be pivoted in slots in the guide-post B, B, and may be pressed inward by springs *h*, *h*. The latches are adapted to be withdrawn by the car and to this end each may be formed with an ear *h'* which is engaged by a cam or incline *a'* fixed to the car.

The operation is as follows: As the car rises from the position shown in Fig. 1 and approaches the level of the sidewalk or floor, the doors D, D, being open and the gate assumed to be in its highest position, the inclines *a'*, *a'*, withdraw the latches H, H, from beneath the gate and allow the latter to fall. As the gate falls the chains F, F, attached thereto are moved and the fingers *f*, *f*, are brought into the position shown in Fig. 2 immediately below the fingers *a*, *a*, which are fixed to the car. If now the car be lowered the fingers *a*, *a*, will engage the fingers *f*, *f*, of the chains and will thereby raise the gate to the position shown in Fig. 1. As the fingers *f*, *f*, reach the lower pulleys G, G, they will pass out of the path of the fingers *a*, *a*, allowing the car to descend as far as desired.

I prefer to place lugs or ears *d*, *d*, upon the under side of the doors D so that they shall form ways for the gate, as shown in Fig. 1, to steady the same when it is in its highest position.

It is obvious that the arrangement shown in the drawings might be varied without departing from the spirit of my invention. Thus a single chain might be applied to the middle of the gate and a single latch might be similarly placed, but I prefer the arrangement shown.

I claim as my invention—

1. The combination of an elevator gate adapted to slide vertically and to drop below the level of the floor, a latch to hold said gate in its highest position, an endless chain attached to the gate, and having a projection thereon, a car, a finger fixed to said car and adapted to move therewith in the same path

with the projection on the chain, and an incline carried by said car and adapted to withdraw the latch, substantially as shown and described.

2. The combination with an elevator, a gate to stand above the level of the floor and means actuated by the movement of the car to raise said gate, of doors to close the opening in the floor, said doors having lugs or ears forming ways for said gate to steady the same, substantially as shown.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES F. DÉ ARDEN.

Witnesses:
A. N. JESBERA,
A. WIDDER.