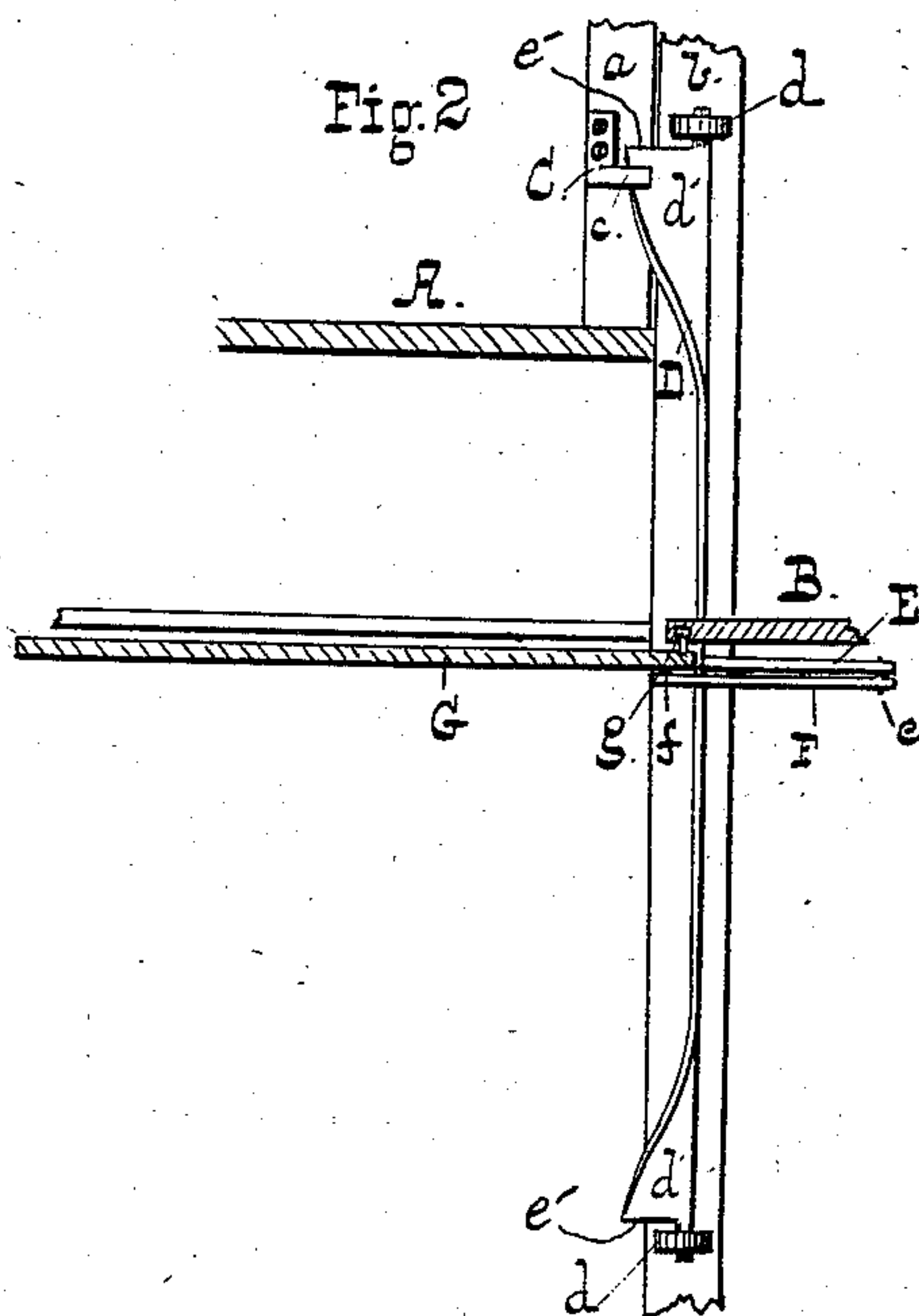
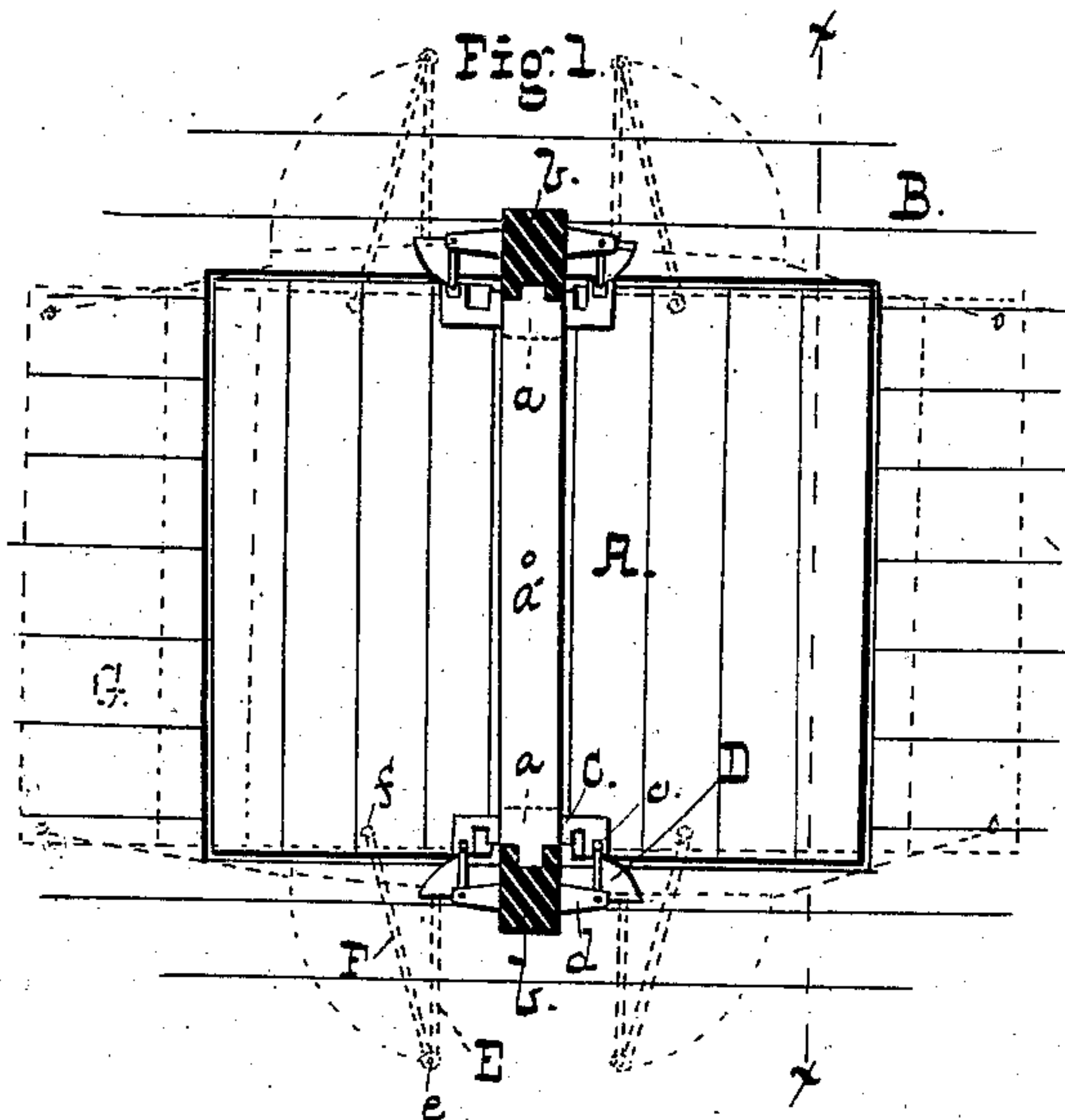


(No Model.)

S. H. THORNTON.
ELEVATOR.

No. 256,517.

Patented Apr. 18, 1882.



WITNESSES.

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INVENTOR

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3y

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UNITED STATES PATENT OFFICE.

STEPHEN H. THORNTON, OF BALTIMORE, MARYLAND.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 256,517, dated April 18, 1882.

Application filed October 10, 1881. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN H. THORNTON, of Baltimore city, State of Maryland, have invented certain new and useful Improvements in Elevators; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of the device, and Fig. 2 is a sectional view on line *xx* of Fig. 1.

My invention relates to elevators such as are in general use in warehouses or stores, the hatchways through the various floors being uninclosed; and it has for its object to provide a sliding hatch adapted to open in advance of the elevator as it rises or descends and to close behind it, the device being so constructed as to be adaptable to elevators already in use and at a trifling cost.

I am aware that self-closing hatchways are already in use; but they are generally of such construction as to require great changes in, if not an entire abandonment of, existing structures in applying them.

My invention is, as stated, not open to this objection, as absolutely no change is required to adapt it to the conventional elevator, the parts constituting the sliding hatch and operating mechanism being simply added to the structure.

In the drawings, A is the platform, having side posts, *a*, and top bar, *a'*, for the attachment of the lifting rope or chain.

B is the floor, and *b b* are the guide-posts, all of the usual construction. To the posts *b* are firmly bolted, above and below the hatchway, perforated lugs *d d* on either side, and in these are pivoted metallic plates D, which are plane throughout their length, except at the ends *d'*, where they are twisted, as shown, through about a quadrant. The ends *e'* of the twisted portions lie in the same plane. In the posts *a*

are bolted lugs C, having lips *c*, adapted to engage with the ends *e'*, the openings between the lips flaring to either side, so as to insure engagement with the ends *e'*, which latter are sharpened to facilitate their entrance between the lips. To the plates D are secured arms E, which are pivoted at *e* to bars F, that are pivoted *f* to the sliding half-hatches G. These latter slide on ways *g*, attached to the main floor.

The operation is as follows: As the elevator descends the lugs C engage with the twisted or volute ends of the plates D, and as they move either upward or downward they turn the plates through a quadrant, the arms E moving through the dotted arcs, Fig. 1. Each half-hatch is thereby made to slide back to allow the car to pass, when the lugs, engaging with the volute portions at the opposite ends of the plates, close the hatches behind the car and leave the plates in proper position for engagement with the lugs as the car returns. I have shown the sliding half-hatches as below the floor; but they may be placed above it, if preferred.

The plates may be made to turn through more or less than a quadrant, and instead of the arms E F, I may use a system of pulleys and ropes to move the hatch or hatches. I believe the construction described and shown to be preferable, however, as cheaper and more reliable and certain in its operation.

What I claim is—

In combination with the elevator having lugs C, the pivoted plates D, having volute ends, the sliding half-hatches G, and arms E F, as set forth.

STEPHEN H. THORNTON.

Witnesses:

R. D. WILLIAMS,
W. A. BERTRAM.