H. REESE.

SELF-CLOSING HATCHWAY.

No. 180,065. Patented July 18, 1876.

Fig. 1.

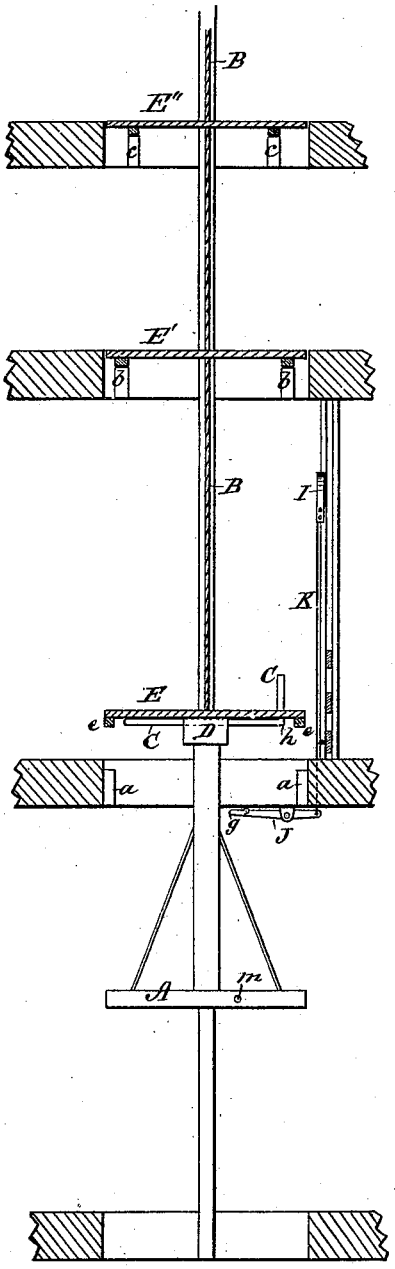

Fig. 2.

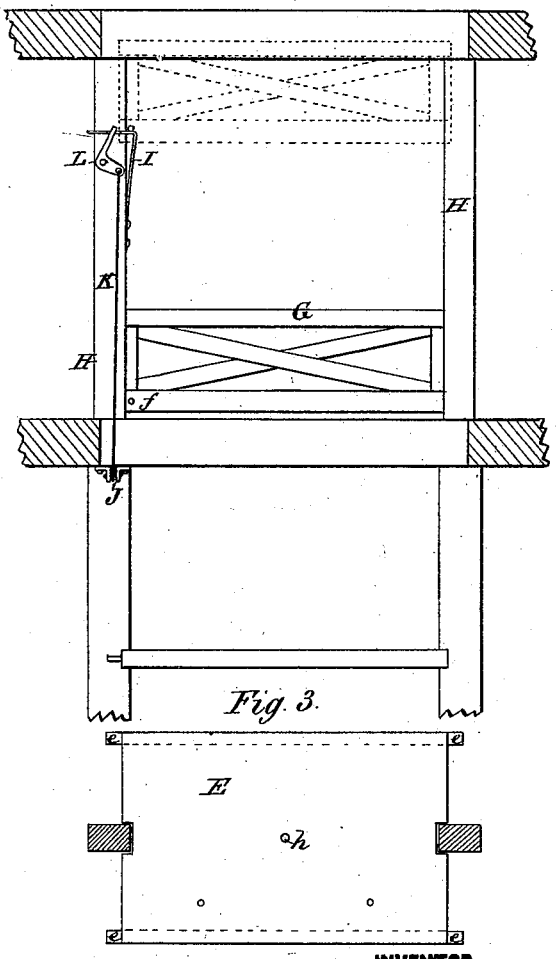

Fig. 3.

WITNESSES:

Solon C. Kemon

Amos W. Hart

INVENTOR:

Henry Reese

BY Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

HENRY REESE, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN SELF-CLOSING HATCHWAYS.

Specification forming part of Letters Patent No. **180,065**, dated July 18, 1876; application filed December 18, 1875.

To all whom it may concern:

Be it known that I, HENRY REESE, of Baltimore city, State of Maryland, have invented a new and useful Improvement in Hatchways; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification.

My invention is an improvement in the class of self-closing hatchways in which lift-covers are employed for the openings of the several floors.

The first feature of the invention relates to providing the hoisting-frame, or elevator proper, with bent bars or arms, for supporting the perforated lift-covers, in the manner hereinafter described.

The second feature of my invention relates to a sliding gate, guard, or railing for each floor-opening, the same being arranged to be raised (by hand) when it is desired to transfer goods to or from the platform upon any of the upper floors, and to be automatically released, and thus allowed to resume its place, when the platform descends.

In the drawing, Figure 1 is a sectional elevation of a hatchway, showing the arrangement of hatches or covers for the openings of the several floors; Fig. 2, a similar view, showing the arrangement of sliding gates. Fig. 3 is a plan of a hatch.

A, Fig. 1, indicates the platform, and B the hoisting-ropes, of the elevator. Iron bars C, having their outer ends bent upward at a right angle, are attached rigidly to the top or cross-bar D of the frame of the elevator proper, and the covers or hatches E E′ E″ of the several floor-openings are taken up in regular succession by said bars whenever the platform ascends. The bent ends of the bars pass through holes *h*, made in the hatches, the object being to guide the latter and prevent their being thrown or jostled out of place, and to insure their falling exactly into the proper position as the platform moves up and down.

Cleats *a a* are secured in the corners of the first-floor opening, upon which the hatch E is supported when closed. The second and third floor hatches E′ E″ are supported by similar cleats, *b b* and *c c*, secured at different distances from the corners of the respective floor-openings, as shown. The several hatches are slotted or notched at different points to allow them to pass the cleats. While each hatch may pass freely up and down through any opening above, it is prevented from passing down through the opening which it is designed to close or cover. For illustration, hatch E′ may pass through any or all the openings above, but is arrested by cleats *b b* when the platform-beam D descends through the second-floor opening, which it (hatch E′) is designed to cover. In this manner the hatchway is kept constantly protected and closed at any point above that where the elevator-platform may chance to be. To secure protection against accident at any opening below that to which the platform may have been elevated, I provide the guards or gates G, which are arranged to slide vertically in suitable ways or grooved guides H, extending upward from each of the upper floors. The gates will be raised by hand when it is desired to load or unload goods on or from the platform A. In such case they are held elevated by means of a spring-latch, I, which engages a lug, *f*, on the gate.

J is a lever, pivoted in suitable bearings, and connected by the rod K with the bell-crank L. Projecting from one side of the platform of the elevator is a stud or lug, *m*, which, as the elevator ascends, raises the free end *g* of the lever J, which is connected to the body of the lever by means of a rule-joint, as shown. The lever is, therefore, not vibrated as the platform ascends; but when the same descends, said lug *m* strikes and depresses the jointed end *g* of the lever, thus causing the rod K to operate the bell-crank, draw back the spring-latch I, and free the gate, which then falls by its own weight. The several gates are, in practice, provided with counter-balance-weights to facilitate raising them, but not sufficiently heavy to prevent them from falling readily when released from the spring-latch.

I am aware that elevator-platforms have been provided with elastic blocks, adapted to enter cavities in the under side of a hatch

for the purpose of breaking the shock of contact, and holding the hatch in proper position on the platform.

What I claim is—

1. The combination, with the platform-frame and the series of hatches E E′ E″, having coincident openings *h*, of two or more horizontal bars, C, secured to, and extending laterally from, the cross-beam D, and bent upward at one end, so as to receive and penetrate the several hatches, all as shown and described, to operate as specified.

2. The combination, with the platform provided with stud *m* and the vertically-sliding gates G, of the spring-catch I, the rod K, and jointed trip-lever J, as shown and described, to operate as specified.

HENRY REESE.

Witnesses:
JNO. E. REESE, Jr.,
THOS. L. REESE.