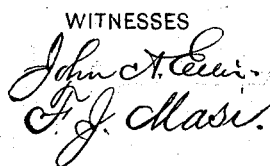


No. 219,474.

Patented Sept. 9, 1879.



INVENTOR
Walter A. Holbrook,
by E. W. Anderson
his ATTORNEY

UNITED STATES PATENT OFFICE.

WALTER A. HOLBROOK, OF MILWAUKEE, WISCONSIN.

IMPROVEMENT IN AUTOMATIC HATCHWAY-DOORS.

Specification forming part of Letters Patent No. **219,474**, dated September 9, 1879; application filed July 2, 1879.

To all whom it may concern:

Be it known that I, WALTER A. HOLBROOK, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and valuable Improvement in Automatic Hatchway-Doors for Elevators; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical section of my invention. Fig. 2 is a detail view of the same. Fig. 3 is a detail view of my latch.

This invention has relation to improvements in hatchway-doors for elevators; and the nature of the invention consists in the combination, with the connected oppositely-opening doors of a hatchway, connected together by a spring-actuated latch, of pushers erected on the elevator-platform, and provided with a key entering a hole in the said doors, and detaching the latch from its catch.

It also consists in certain other minor improvements, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A designates the hatchway, and B B' doors hinged to opposite sides thereof, and completely closing the same. These doors may be either of wood or iron, and when closed are locked together by a strong spring-actuated latch, D, that engages automatically a catch, *a*, of the door B', the said latch being upon door B. These doors are so connected together that the opening of one causes the opening of the other, and the closing of the one that of the other. The mechanism used for this purpose will be hereinafter explained.

C designates the platform, not differing in construction from those in common use, and vertically movable on ways D', extending from the ground-floor up through the various hatchways. Erected at one side of this platform is a rigid metallic rod, J, overhanging the platform in rounded form, as shown at *b*, and provided with two or more rubber anti-friction pulleys, *c*. This rod is braced to the

cross-bar *d* of the platform-frame by an upright bar, *d'*, that terminates in an angular spear-head, *e*, which, as the platform is raised, enters an opening, *i*, in the adjoining edges of the doors, and by its wedging action disengages the latch D from its catch *a* at the moment that the upper roller, *c*, comes in contact with the under side of the door B', thus unlocking the said doors and allowing them to be pushed open in advance of the platform by the successive impact of the rollers for the passage thereof. One of the doors is weighted, so that at the moment that the platform is through, these doors being connected to open or close together, they close automatically.

Upon the under side of the platform is a second pusher, P, not differing from that already described, that opens the doors when the platform descends and allows it to pass through the hatchways.

The doors are connected at one or both ends by the following mechanism: As aforesaid, the doors B B' open oppositely—that is, one up and the other downward—and they are each provided near their hinge-joint with the combings of the hatchway with a projecting arm, *o*, to the extremities of which are pivoted the ends of a sufficiently rigid connecting-rod, O. When the door is raised by the lifter J, the door B is vibrated downward by the connecting-rod O, and the elevator-platform passes readily through the hatchway.

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

1. In a mechanism for opening hatchway-doors for elevators, the combination of the oppositely-opening connected doors B B', and a latch mechanism locking them together, with a platform, C, carrying the pusher J, provided with a spear-head, *e*, at its upper end, throwing the latch out, substantially as specified.

2. The combination, with the simultaneously opening and closing doors B B', and a latch device, D, locking them together, of an elevator-platform, C, having a pusher, J, erected thereon, and the spear-head *e*, detaching the latch from its catch, substantially as specified.

3. The combination, with the oppositely-opening doors B B', having projecting arms o, and a connecting-rod, O, pivoted to said arms, of a platform, C, having pusher J, overhanging the same, in rounded form, and provided with rubber anti-friction rollers c on the said rounded portion, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WALTER A. HOLBROOK.

Witnesses:

THOS. JEFFERSON PERELES,
RIP REUKEMA.