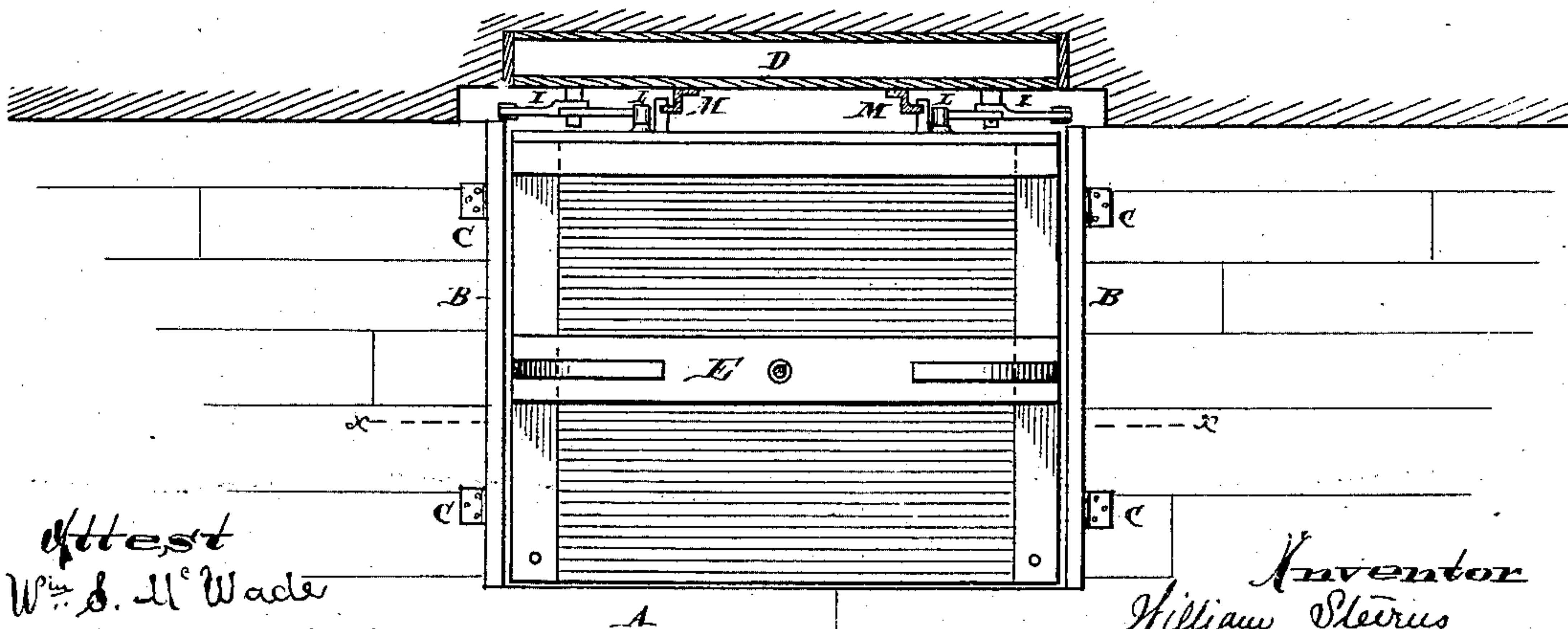
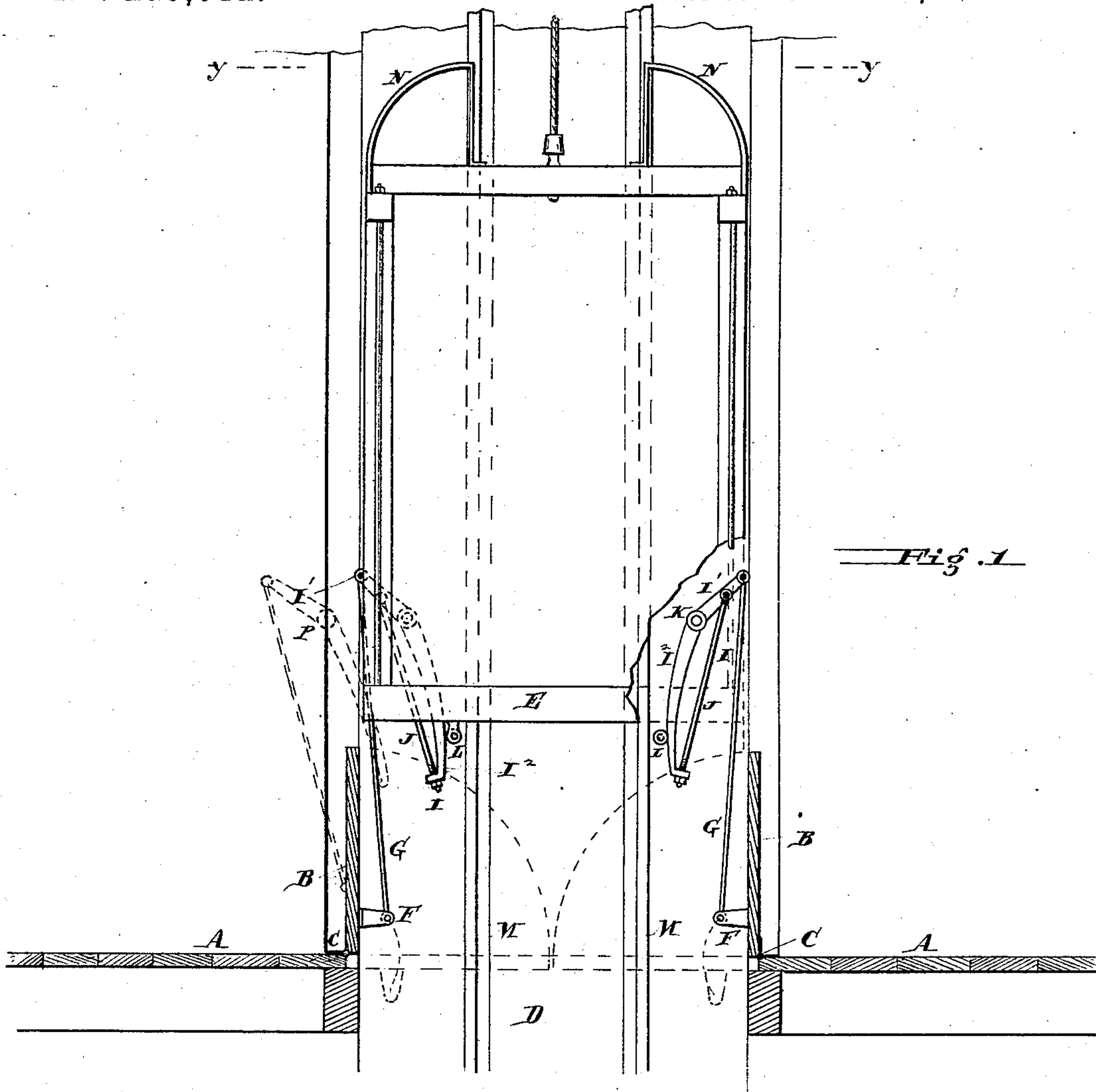


(No Model.)

W. STEVENS.  
ELEVATOR HATCH.

No. 279,612.

Patented June 19, 1883.



Attest  
W. S. Wade  
Joshua Mattack.

Inventor  
William Stevens  
By his atty.  
*W. S. Wade*



# UNITED STATES PATENT OFFICE.

WILLIAM STEVENS, OF PHILADELPHIA, PENNSYLVANIA.

## ELEVATOR-HATCH.

SPECIFICATION forming part of Letters Patent No. 279,612, dated June 19, 1883.

Application filed May 4, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM STEVENS, of the city of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented an Improvement in Elevator-Hatches, of which the following is a specification.

My invention has reference to elevator-hatches; and it consists in certain improvements therein, as fully set forth in the following specification, and shown in the accompanying drawings, which form part thereof.

Heretofore in making automatic hatch-doors for elevators in which the guide is arranged against the wall it has been necessary to place the arms or levers which lift the doors sufficiently far to the sides that the rods which are attached to the doors shall pull backward when the said doors are raised to insure their being opened fully; otherwise the descending cage would catch upon their edges and be arrested. In numerous instances it is found that there is not sufficient space upon either side of the elevator close to the wall to place said lifting-arms in such positions. My object, therefore, is to provide suitable means whereby said lifting arms or levers may be placed in back of the elevator-cage, and so arranged that the lifting ends of said levers or arms may come substantially in line with the raised hatch-door, and yet shall so be devised as to tend to throw it back to insure its being opened fully.

In the drawings, Figure 1 is a sectional elevation of my improved automatic elevator-hatch doors on line *xx*, and Fig. 2 is a sectional plan view of same on line *yy*.

A is the floor.

B B are the hatch-doors, hinged at C C to the said floor or hatch-frame.

D is the usual weight-box, and has the guides M M, upon which the cage or platform E runs.

Secured to the side of the doors B, and at a short distance from their hinged edges, are the brackets F, which, when the doors are closed, project downward for a few inches. Connecting the ends of said brackets with the lifting ends of arm I' of the lever I are rods G. The levers or arms I are preferably made of two distinct arms, I' and I<sup>2</sup>, hinged together at K, the fulcrum of the compound levers I, the said

arms I' and I<sup>2</sup> being adjusted and held at any desired angle to each other by links and nuts J, as more fully set out in a patent granted to me August 8, A. D. 1878, and numbered 206,842.

The pivot-points K are arranged close to the guides M, so as to bring the ends of arms I' in line with the hatch-door when open. Rollers L are secured to the cage E, and when the latter is descending press upon the arms I<sup>2</sup> and cause the doors to be lifted. In ascending, the bow N, on top of the cage, raises the doors from below.

The former location of the lifting devices is indicated by dotted lines on left-hand side of Fig. 1, and it is evident that if bodily shifted toward the center, so as to bring the lifting-rod G in line with the door, it would be impossible to open the door fully, as the pull or lift would be in line with said door from its hinged edge upward. Now, by the addition of the bracket F, this difficulty is readily overcome, as the slightest movement of the lifting-rod G tends to throw back the door clear of the descending cage. If desired, the lifting-arms I may be made of one piece, and may be located at any place between the two hatch-doors, or even slightly beyond them.

I do not limit myself to the exact construction shown, as it may be modified in various ways without departing from my invention.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an automatic hatch-door attachment for elevators, the hinged doors, in combination with lifting-arms arranged to be actuated by the descending cage, the lifting ends of said arms being arranged at or about in line with the open hatch-doors, and connecting mechanism between said arms and doors, whereby the said arms tend to force the doors outward beyond a vertical line to clear the hatch-way, substantially as and for the purpose specified.

2. The combination of the hatch-doors with lifting-arms located within a vertical line through said doors when raised, rods or links connecting said lifting-arms to the door a short distance below its under face, and a cage or

platform adapted to operate said lifting-arms in the act of descending, substantially as and for the purpose specified.

3. The combination of the hatch-doors B, 5 brackets F, projecting below the said doors, rods G, lifting-arms I, and cage E, having rollers L, substantially as and for the purpose specified.

In testimony of which invention I hereunto set my hand.

WM. STEVENS.

Witnesses:

R. M. HUNTER,  
R. S. CHILD, Jr.