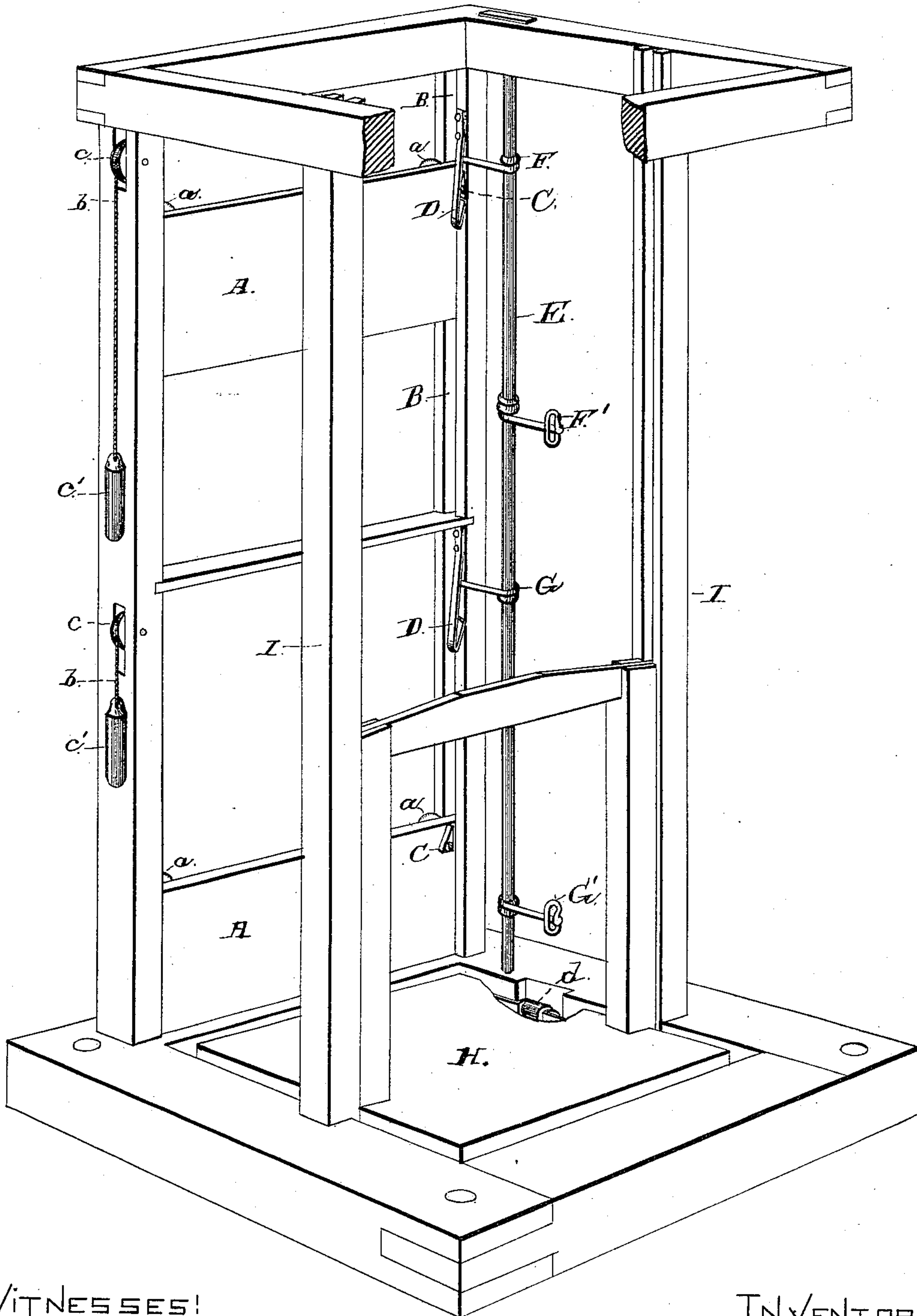


(No Model.)

I. K. BEEKMAN.  
ELEVATOR GATE ATTACHMENT.

No. 300,677.

Patented June 17, 1884.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

ISAAC K. BEEKMAN, OF DUBUQUE, IOWA.

## ELEVATOR-GATE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 300,677, dated June 17, 1884.

Application filed March 20, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, ISAAC K. BEEKMAN, of Dubuque, in the county of Dubuque and State of Iowa, have invented a new and useful Improvement in Elevator-Gate Attachments; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

My invention relates to means for automatically closing the vertically-sliding gates or doors of an elevator-shaft immediately after the elevator passes each floor in ascending and descending.

It therein consists in the employment of a catch and a spring-pawl engaging with the former to hold the gate or door open, in means adapted to release said pawl from its engagement with the catch, and in means provided upon the elevator-platform whereby the gate or door is released and closed immediately after the elevator passes each floor in ascending and descending, all as more fully hereinafter described and claimed.

For the better understanding of the construction, arrangement, and operation of my device, attention is invited to the accompanying drawing, which illustrates in perspective my improvements as applied to an elevator and its shaft, showing two gates or doors—one open and the other closed—and the operating parts in their respective positions.

Like letters of reference denote corresponding parts.

Referring to the drawing, A A denote the gates or doors, which fit within and travel vertically in grooved uprights B B. Each door is preferably provided on its outer side and at each corner with a small wheel or pulley, *a*, bearing against its respective upright B, and thereby facilitating the up and down movements of the door. Instead of arranging these wheels or pulleys in the manner above described, they may be mounted in castings upon the ends of the gates or doors and travel in the grooves of the uprights B B.

To the upper corners of the gates or doors are secured cables *b b*, which pass up over pulleys *c c*, mounted in the uprights B B at a sufficient height above each gate to allow the same to be opened. These cables have at-

tached to their opposite free ends the weights *c' c'*, by means of which the gates are nearly balanced, thus requiring but little pressure to raise or lower the same.

To the inner side of each gate or door A, near one upper corner of the same, is secured a catch, C, having an inclined upper face, and as the gate or door is raised this catch readily engages with a spring-pawl, D, and holds the door in an elevated position until the engagement is broken. The spring-pawl D is secured to the upright B just beneath each floor, and its lower end is bent, as shown, to allow the catch C to readily pass it, and then be caught on the underside. A vertically-arranged shaft or rod, E, passes through the several floors next to the upright B, (to which the spring-pawls D are secured,) and has loose bearings at its ends in the extreme upper and lower floors. To this shaft or rod E are secured in any suitable manner, and at proper points thereon, several levers, F F' and G G'. The free ends of the levers F and G engage with the underside of the spring-pawls D D; or, in other words, they are located between said pawls and the upright B, and the ends of the levers G and G' extend outward in an opposite direction, and are of a proper adaptation to engage (in the ascent and descent of the elevator) with a friction-roller, *d*, mounted in proper bearings secured to the side of the elevator platform or car H, which travels in the grooved uprights I I.

The operation of my device is as follows: Upon the ascent of the elevator, as or when it reaches the first floor or landing, the attendant with his hand raises the gate or door, and its catch C is caught by the spring-pawl D, and the door is thereby held elevated until the elevator reaches the lever G', when its roller *d* will come in contact with the end of said lever and press it outward, this action turning the shaft or rod E, and causing the lever G next above to press its spring-pawl outward from under the catch, and thereby release the door and allow it to fall and close. These manipulations are repeated at the different floors or landings as the elevator continues to ascend, and the same results follow in the descent of the elevator, the doors closing with certainty immediately after the elevator passes each floor.



Without the exercise of invention these several elements constituting my invention may be modified both in construction and arrangement with certainty as to results; but the present forms and arrangement appear to be the cheapest, the most simple and successful.

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

1. In a device for automatically closing the vertically-sliding gates of an elevator-shaft, the combination, with the catch C and spring-pawls D, of a series of levers engaging with the spring-pawls to release the gates or doors as the elevator leaves each landing in ascending and descending, substantially as described.

2. In a device for automatically closing the vertically-sliding gates or doors of an elevator-

shaft, the combination, with a catch and pawl for holding the gates or doors open, of the vertical rod E, provided with the levers F F' and G G', substantially as and for the purpose set forth.

3. In a device of substantially the character described, the combination, with the vertical rod E and its series of levers, of the elevator-platform provided with the friction-rollers d, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ISAAC K. BEEKMAN.

Witnesses:

WILLIAM GRAHAM,  
MONROE M. CADY.