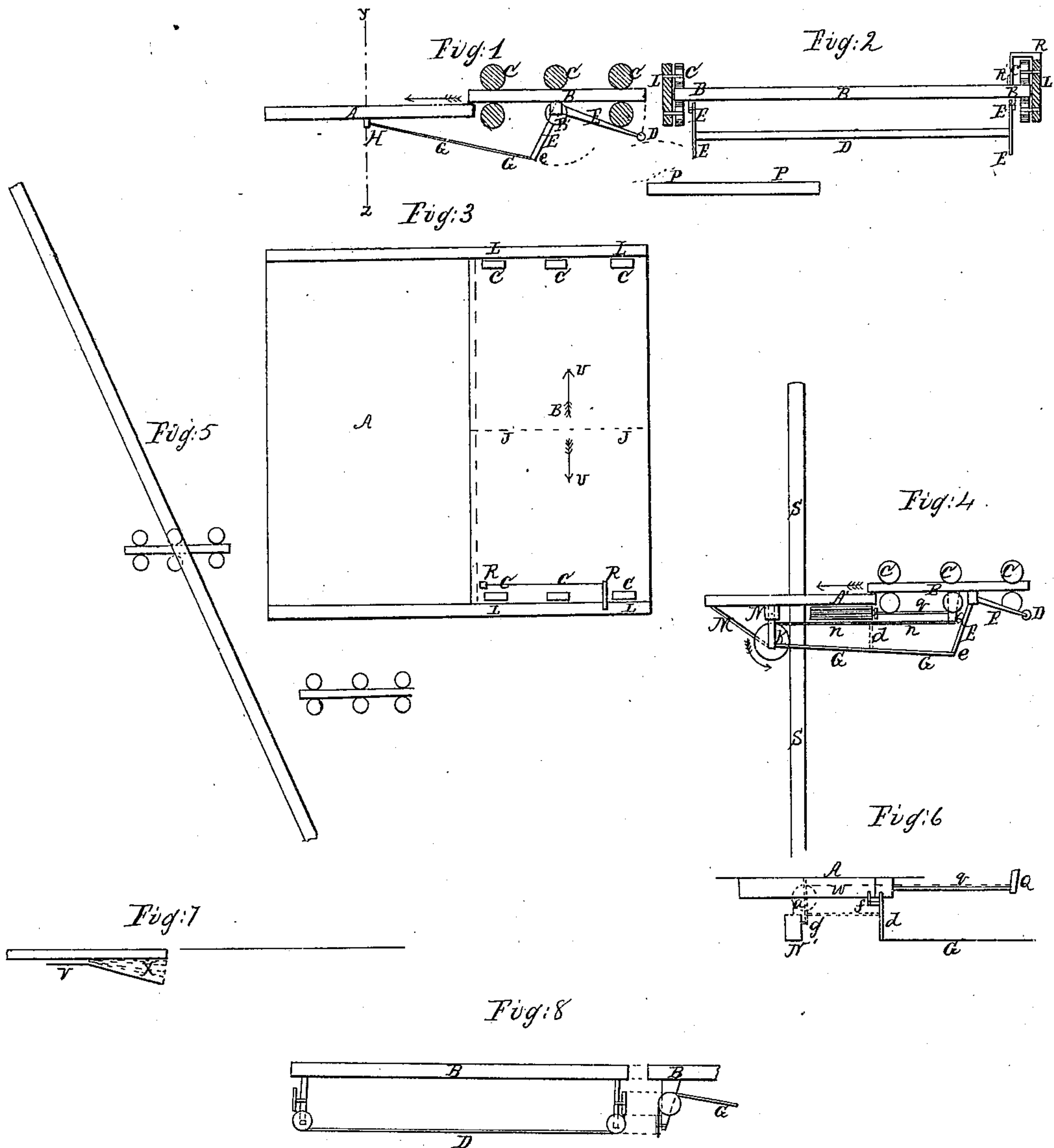


J. S. BALDWIN.
ELEVATOR.

No. 76,692.

Patented Apr. 14, 1868.



Witnesses
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JAMES S. BALDWIN, OF NEWARK, NEW JERSEY.

Letters Patent No. 76,692, dated April 14, 1868.

IMPROVED ELEVATOR.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JAMES S. BALDWIN, of Newark, in the county of Essex, and State of New Jersey, have invented a new and improved Method of Constructing Elevators Used for Transporting Passengers; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention has for its object the prevention of those accidents which occur through the interposition of some part of the human body between the edge of the elevator while in motion, and the edge of the landing. To this end I construct the said edges in such a manner that they will recede when brought in contact with an interposed body, leaving a clear space of sufficient width to prevent any injury.

In the several figures of the drawing, let A represents the main platform of the elevator, and B the yielding or receding portion moving on the friction-rollers C C C. Y Z is a line showing the vertical direction of the slides. P P is the landing. It is apparent that if the platform A B is descending, an interposed object, shown by the outline between P and D, must, by its contact, impart an upward motion (relatively to B) to the bar D, and a partial rotative motion to the bent levers E E E E, Figures I and II. The end, *e*, of each lever being connected with the main platform A by the rod or cord G G, the upward motion of the bar D must cause a backward motion of the platform B, to an extent determined by the relative length of the two arms of the lever E E.

In the plan described, the platform or edge B is withdrawn by the immediate action of the force applied, but, when B is large and heavy, it will be necessary to employ a reserve force, which, being released or called into action by a slight pressure on D, will cause the movement of the several parts, as hereinbefore described, to be made at once, as in Figure IV, where G is attached and imparts its motion to the handle *d*, and also to the arm pendent from the joint N. This arm, with one on the opposite side, carries the drum K, from which passes the cord *n n*, which is firmly attached to the projection Q. M is a weak spring drawing K back when there is no tension on G G. The cylinder A' is fitted with a piston, the rod, *q*, from which passes out through a stuffing-box, and is firmly attached to Q. A pipe and faucet or stop-cock place the front end of B in communication with a suitable reservoir of gas or liquid under pressure. The handle *d* of the stop-cock has been before referred to. If, now, G is drawn by pressure on D, the handle *d*, which is attached to it, will be turned, the stop-cock opened, and the gas or liquid will drive back the piston, its rod *q*, and the projection Q, and yielding platform B, as indicated by the arrow. Instead of gas or liquid under pressure, I prefer to employ a compressed helical or other spring released by drawing the catch or bolt *f*, Figure VI. A simple but less compact substitute for the spring is the weight N', cord *w*, and pulley *a*. The weight is released by drawing a suitable catch, *g*. The same motion of the rod G brings the drum K in contact with the upright stationary piece S S, the friction of which against K causes it to revolve, drawing back the cord *n n*, and with it Q and B, to which it is attached. It is obvious that by the combined action of the several appliances described, the withdrawal of B must necessarily result from any pressure upon D.

The bar D could be replaced by a cord or chain passing back over pulleys, as in Figure VIII, or by a bellows, X, Figure VII, the compressed air passing through the flexible pipe *v* to a cylinder like A', Fig. IV. A similar cylinder, reversed in its direction, throwing the drum *k* into gear K and S S, could, if desirable, be converted into a rack and pinion by the addition of teeth.

I apply the same machinery to the landing S, the drum *k* receiving its motion from some projecting portion of the elevator, or from some portion of its machinery having a coincident motion, and occupying the same relative position.

Where the ways or slides of the elevator are sufficiently inclined, as in Figure V, the yielding platform will recede by direct pressure of an interposed body, returning by the action of light springs of India rubber or wire, as R R', Fig. II and III.

By the application of the principles hereinbefore described, the platform B, being divided in the middle, could be caused to recede laterally, as shown by the arrows U U and the line J J, Figure III.

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

The withdrawal of the yielding platform or edge B by the action of an interposed body, by means and in the manner described.

JAMES S. BALDWIN.

Witnesses:

C. S. BALDWIN,
S. A. BALDWIN.