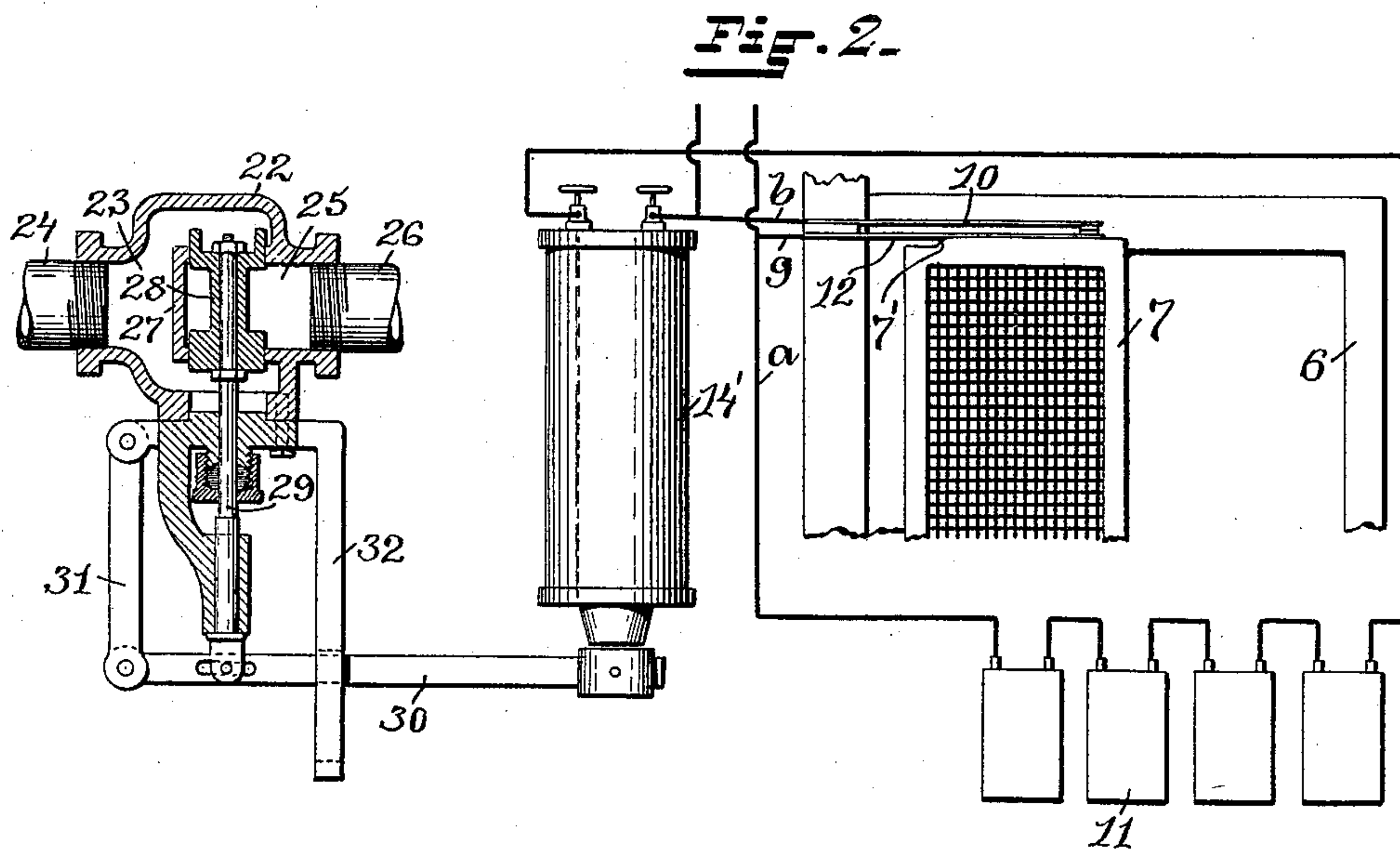
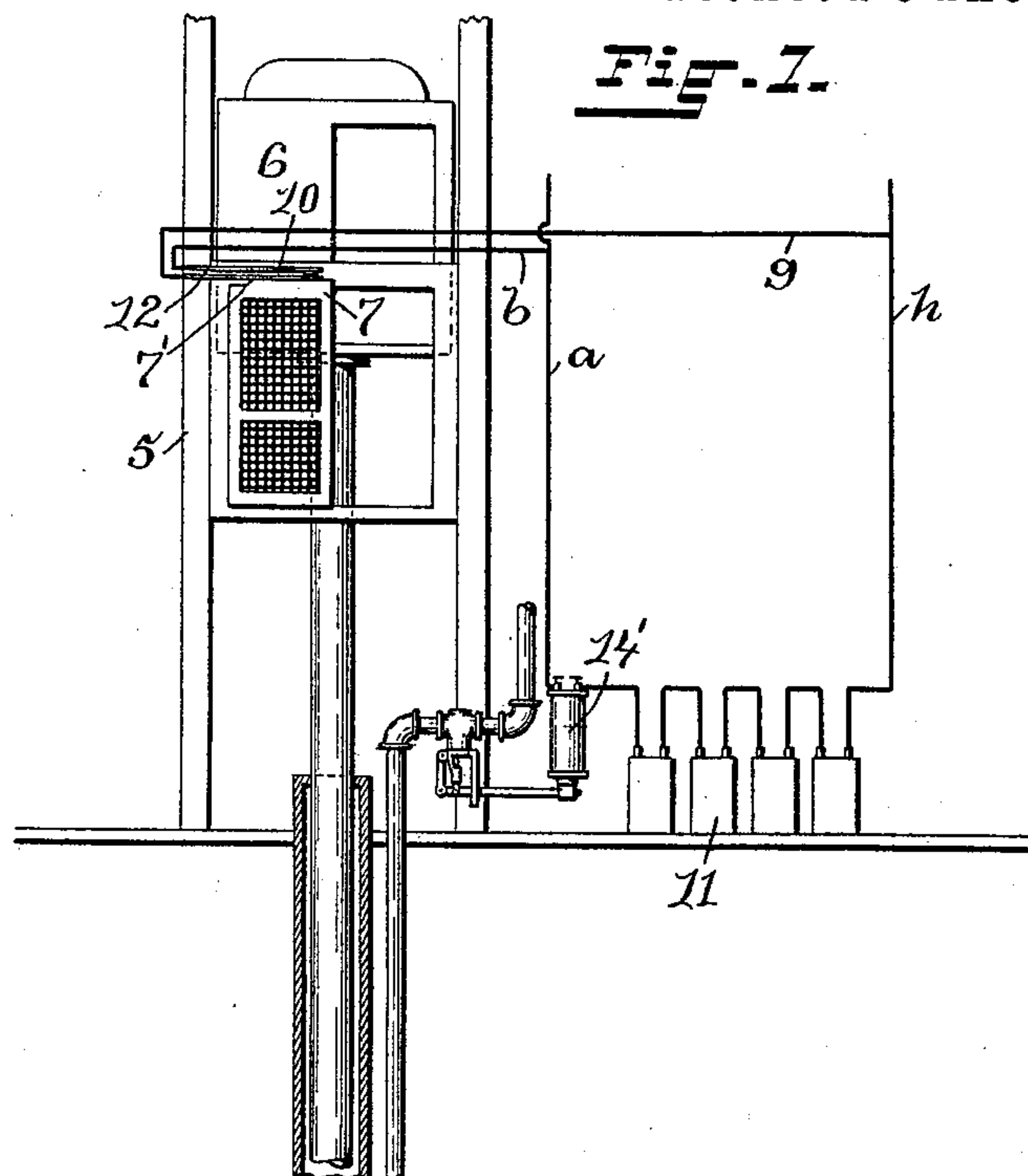


(No Model)

C. O. LENZ & C. H. NEWHALL.  
CONTROLLER FOR ELEVATORS.

No. 585,112.

Patented June 22, 1897.



**WITNESSES:**

Henry J. Miller.  
Chas. H. Luther Jr.

**INVENTORS:**

Charles O. Lenz and  
Charles H. Newhall  
by Joseph A. Miller & Co.  
Attys.



# UNITED STATES PATENT OFFICE.

CHARLES O. LENZ AND CHARLES H. NEWHALL, OF PROVIDENCE, RHODE ISLAND; SAID LENZ ASSIGNOR TO SAID NEWHALL.

## CONTROLLER FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 585,112, dated June 22, 1897.

Application filed August 24, 1895. Serial No. 560,443. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES O. LENZ and CHARLES H. NEWHALL, of the city of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Controllers for Elevators; and we hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to improvements in elevator-controlling devices.

The object of the invention is to so construct an elevator that upon the opening of a door leading to the elevator an electrically-actuated stop is brought into play to prevent the operation of the car.

The further object of the invention is to produce a novel electrically-operated safety-stop for elevators.

The invention consists in such peculiar features of construction and combination of parts as are hereinafter described, and pointed out in the claims.

Figure 1 represents a front view of a plunger-elevator, showing the electrically-actuated stop connected with a supply-valve. Fig. 2 is an enlarged view of portions of the same, showing in section details of the supply-valve and its connection with the magnet.

Similar numbers and letters of reference designate corresponding parts throughout.

In the drawings, 5 indicates an elevator-well constructed in any well-known manner and extending through the number of floors of a building which it is desirable to reach by elevator. At each floor access is had to the elevator-shaft and to the car 6, movably supported therein, by means of doors 7 7, mounted to move laterally from before the openings in the front of the elevator-well and having shoulders, as 7'.

The contacts 10 and 12 are connected with an electrical circuit, including the wires *a b* and *g h*, connecting with the battery 11 or other source of electrical energy and with the magnet 14', located in a position to act on the lever of a supply-valve located between the main water-supply and the elevator-controlling valve.

The supply-valve consists of a casing 22, having the inlet-chamber 23, connected with the supply-pipe 24, and the outlet-chamber 25, connected by the pipe 26 with the elevator-controlling valve. The outlet-chamber 25 has an extension 27, furnished with ports in which the valve 28 is adapted to reciprocate, the valve being constructed to close the ports when raised and to open the same when lowered. Secured to the valve 28 is the valve-stem 29, which extends down through a suitable stuffing-box and is pivotally connected at its lower end with the armature-lever 30, this being pivoted at one end to the rod 31, which in turn is pivoted to a stud extending from the stuffing-box frame. When in the released position, the lever 30 is supported by the arm 32, through a slot in the lower end of which the lever works.

When the contacts 10 and 12 are brought together by the opening of the door 7, the magnet 14' is energized by the current passing through the completed circuit and the armature end of the lever 30 is drawn upward, the valve 28 being at the same time pushed upward by the valve-stem 29, thus closing the passage for the water or steam to the elevator-controlling valve and preventing the operation of the elevator. When, however, the circuit is broken by the closing of the door, the lever 30 drops away from the magnet 14', the valve 28 is opened, and the steam or water passes through the valve-ports to the controlling-valve.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. In an elevator-controlling device, the combination with the elevator-car, its operating mechanism, a valve through which fluid may pass to said operating mechanism, and an armature-lever for actuating the valve, of a magnet adapted to act on said armature when energized, an electrical circuit, including a source of electrical energy and open contacts, and a door adapted to close said contacts when opened, as described.

2. The combination with the contacts 10 and 12, the magnet 14', and an energizing-circuit therefor, of the valve-chamber 22 having the extension 27 furnished with valve-ports,

the valve 28 movable in said ports for opening and closing the same, the valve-stem 29 secured to the valve, the pivotally-supported armature-lever 30 pivoted to the valve-stem  
5 and adapted at one end to be attracted by the magnet when energized, and a door adapted to close said contacts when opened.

In witness whereof we have hereunto set our hands.

CHARLES O. LENZ.

CHARLES H. NEWHALL.

Witnesses:

C. H. LUTTER, Jr.,

J. A. MILLER, Jr.