

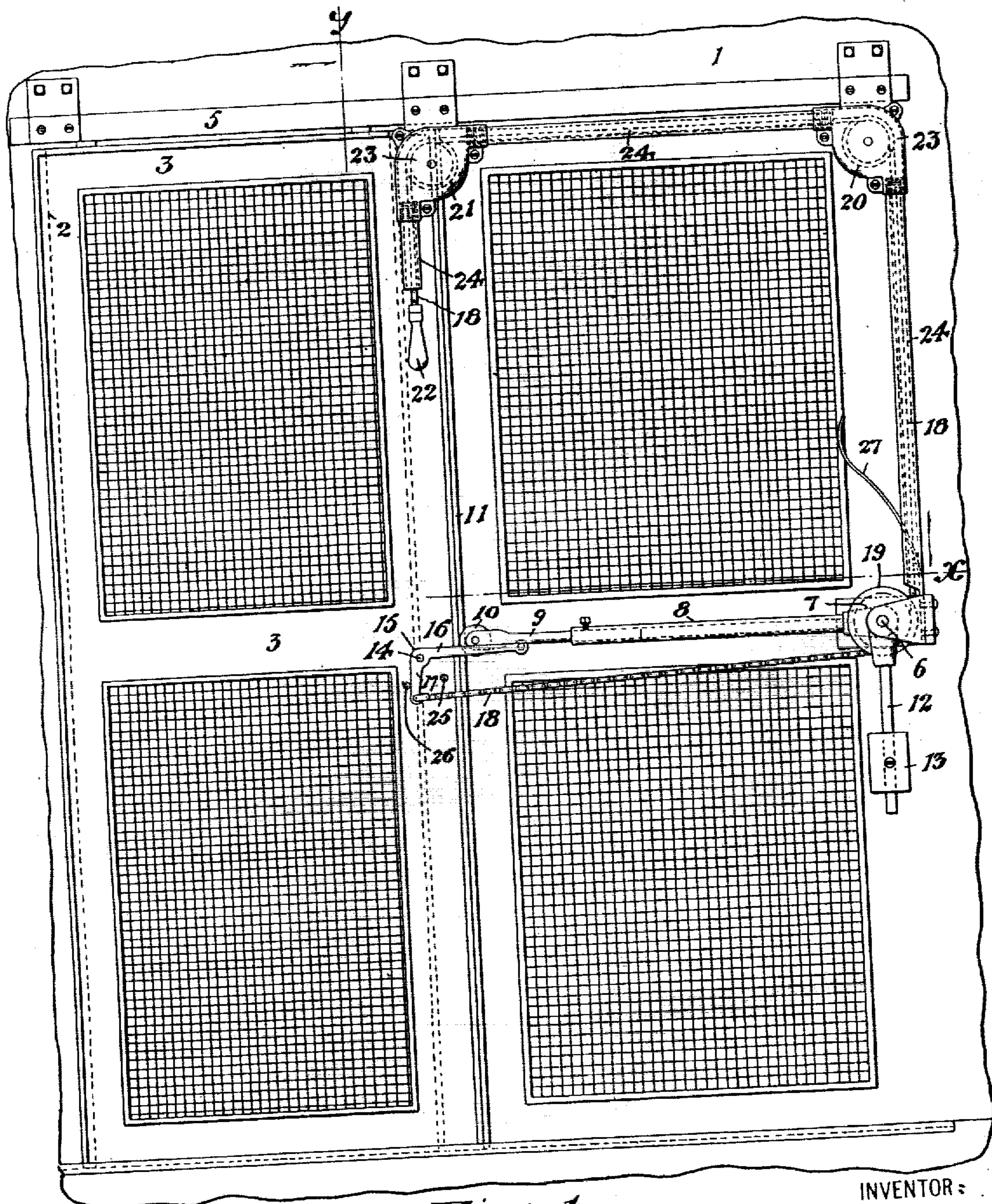
No. 828,558.

PATENTED AUG. 14, 1906.

B. LOVETTE.  
ELEVATOR GATE.

APPLICATION FILED OCT. 20, 1906.

2 SHEETS—SHEET 1.



WITNESSES:

*Ralph Lancaster*  
*Russell M. Everett*

*Fig. 1.*

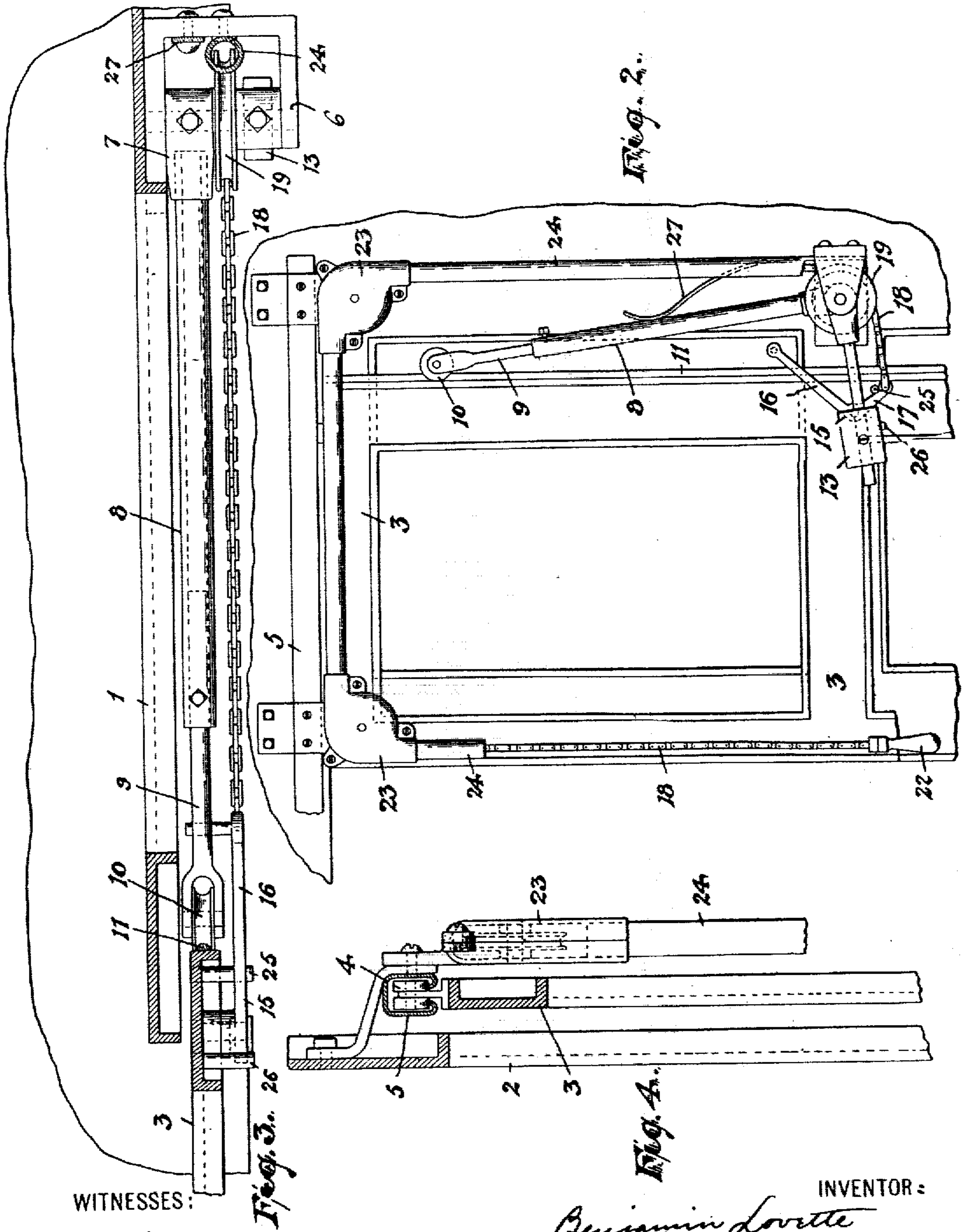
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INVENTOR:

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ELEVATOR GATE.

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2 SHEETS—SHEET 2.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

BENJAMIN LOVETTE, OF NEWARK, NEW JERSEY, ASSIGNOR OF ONE-HALF TO BENJAMIN F. PANGBORN, OF NEWARK, NEW JERSEY.

## ELEVATOR-GATE.

No. 828,558.

Specification of Letters Patent.

Patented Aug. 14, 1906.

Application filed October 20, 1905. Serial No. 283,600.

*To all whom it may concern:*

Be it known that I, BENJAMIN LOVETTE, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Elevator-Gates; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to numerals of reference marked thereon, which form a part of this specification.

This invention relates to means for opening and automatically closing the doors of elevator-shafts; and the objects of the invention are to secure a door which is normally held closed and which will remain open only while positively held by the elevator man, to secure a simple and inexpensive construction and one which shall be durable and not likely to get out of order, and to obtain other advantages and results, some of which may be hereinafter referred to in connection with the description of the working parts.

The invention consists in the improved device for operating elevator-gates, and in the arrangements and combinations of parts of the same, all substantially as will be hereinafter set forth and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like numerals of reference indicate corresponding parts in each of the several figures, Figure 1 is a view from the inside of the elevator-shaft of my improved device applied to a gate or door, said door being shown in closed position. Fig. 2 is a similar view showing the position of the various parts of my apparatus when the door is open. Fig. 3 is a sectional view on line *x*, Fig. 1, looking in the direction indicated by the arrow; and Fig. 4 is a section upon line *y*, Fig. 1.

In said drawings, 1 indicates the inner wall of an elevator-shaft, having a doorway 2, provided with a door 3, which door is adapted to slide in a plane parallel to the said wall, as by means of rollers 4, running upon a track 5 in any common and well-known manner. It will be understood that this door as the elevator comes to a stop in front of it is to be opened by sliding backward or to the

right-hand side, as shown in the drawings, and as soon as the elevator leaves said door must be closed again. In accomplishing these ends by my improved device I pivot upon the wall 1 of the elevator-shaft, as at 6, a bent or bell-crank lever 7, one arm 8 of which normally lies in horizontal position, abutting at its extremity against the rear edge of the door 3. Preferably this arm has an end section 9 longitudinally adjustable with respect to the main portion and provided at its extremity with a wheel 10, adapted to run upon a track 11, formed by the rear edge of the door. The other arm 12 of said bent lever 7 normally extends downward and carries a weight 13, which serves to hold the said lever in its said normal position. When the door is open, as shown in Fig. 2, the tendency of this weighted lever 7 is therefore to automatically close the door, as will be understood by reference to said Fig. 2. For releasing the said lever 7 from locking relation to the door and opening said door I fulcrum upon the door and near its edge, as at 14, a releasing-lever 15, one arm 16 of which extends past the rear edge of the door and underlies the arm 8 of the main or locking lever 7. Another arm 17 of said releasing-lever 15 extends downward and receives a draft-chain 18, which extends rearward beneath the main lever 7 and around suitable pulleys to a point convenient to the operator's hand. Preferably said chain 18 extends first around a pulley 19, pivoted upon the same shaft 6 with the bent lever 7, then upward over a second pulley 20, horizontally along to the top of the doorway to a third pulley 21, and is then provided with a handle 22, hanging at the inner edge of the doorway convenient to the operator's hand. The said pulleys, as 20 and 21, are preferably inclosed in suitable casings 23, and sheaths 24 preferably inclose the chain at other points of its length.

It will be understood that when the handle 22 is pulled the arm 17 of the releasing-lever 15 will be drawn upon and its other arm 16 thrown upward, thus throwing the extremity of the main locking-lever 7 upward sufficiently out of perpendicular relation to the door, so that said door can open. Such opening is caused by continued draft upon the handle 22, stop-pins 25 26 limiting motion of

said lever 15, so that the draft comes upon the door itself as soon as the main locking-lever 7 is released.

A spring 27 may serve to cushion the arm 5 8 of the locking-lever as it arrives at its rearward limit of movement in opening the door.

Obviously details of my construction, such as the location of the draft-chain and its mountings and the exact form of the levers, 10 may be varied without departing from the spirit and scope of the invention. I do not, therefore, wish to be understood as limiting myself by the positive descriptive terms employed herein except as the state of the art 15 may require.

Having thus described the invention, what I claim as new is—

1. The combination with a sliding door, of a pivoted lever adapted to abut at its extremity against said door to hold the same 20 closed, means for holding said lever normally in said locking position, a releasing-lever mounted upon the door for disengaging the said locking-lever, and draft means connected with said releasing-lever. 25

2. The combination with a sliding door, of a pivoted lever adapted to abut against the rear edge of said door to hold it closed, means for automatically holding said lever in perpendicular relation to said edge of the door, 30 a releasing-lever fulcrumed upon the door and underlying at one extremity the end of said locking-lever and draft means connected with the other end of said lever.

3. The combination with a sliding door, of a pivoted lever adapted to abut against the rear edge of said door to hold it closed, means for automatically holding said lever in perpendicular relation to said edge of the door, 40 a releasing-lever fulcrumed upon the door and underlying at one extremity the end of said locking-lever, draft means connected with the other end of said lever, and stops limiting the motion of said releasing-lever.

4. The combination with a sliding door, of a lever fulcrumed in substantially the same plane with said door and adapted to engage at its extremity the said door, means for normally holding said lever in engagement with 50 the door, a releasing-lever fulcrumed upon the door and adapted at one end to engage the said locking-lever, and draft means connected to said releasing-lever.

5. The combination with a sliding door, of a lever fulcrumed in substantially the same plane with said door and adapted to engage at its extremity the said door, means for normally holding said lever in engagement with the door, a releasing-lever fulcrumed upon 50 the door and adapted at one end to engage the said locking-lever, draft means connect-

ed to said releasing-lever and means for limiting the motion of said releasing-lever.

6. The combination with a sliding door, of a lever fulcrumed at the rear of the door in substantially the same plane therewith and adapted at its extremity to engage the said door, a releasing-lever upon the door adapted at one arm to engage said locking-lever, a pulley having the same fulcrum as said locking-lever, a second pulley above the first, a third pulley, and a chain extending from the other arm of said releasing-lever around said sheaves. 70

7. The combination with a sliding door, of a bent lever fulcrumed at the rear of said door in substantially the same plane therewith and having one of its arms adapted to extend horizontally into engagement at its extremity with the edge of the door, the other arm extending downward and being weighted, a releasing-lever mounted upon the door for disengaging the said locking-lever, and draft means connected with said releasing-lever. 85

8. The combination with a sliding door, of a lever fulcrumed at the rear of said door and having an extremity lying in substantially the plane of the door and adapted to abut against its rear edge, means normally holding said lever in such engagement with the door, a releasing-lever fulcrumed upon the door and having an arm underlying the engaging end of the locking-lever, a second arm extending downward, and draft means extending from said second arm rearward from the door. 95

9. The combination with a sliding door, of a pivoted lever adapted to normally abut at its extremity against said door to hold the same closed, a releasing member mounted upon the door and adapted to engage said locking-lever to release the same, and draft means adapted to both operate said releasing member and slide the door open. 105

10. The combination with a sliding door, of a pivoted lever adapted to normally abut at its extremity against said door to hold the same closed, a releasing member mounted upon the door and adapted to engage said locking-lever to release the same, said member having a limited movement independent of the door, and draft means connected to said releasing member. 110

In testimony that I claim the foregoing I have hereunto set my hand this 10th day of October, 1905. 115

BENJAMIN LOVETTE.

Witnesses:

RUSSELL M. EVERETT,  
CHARLES H. PELL.