Nov. 18, 1924. 1,515,621

A. RUSH

MEANS FOR CLOSING DOORS FOR ELEVATOR SHAFTS

Filed Aug. 26, 1922 2 Sheets-Sheet 1

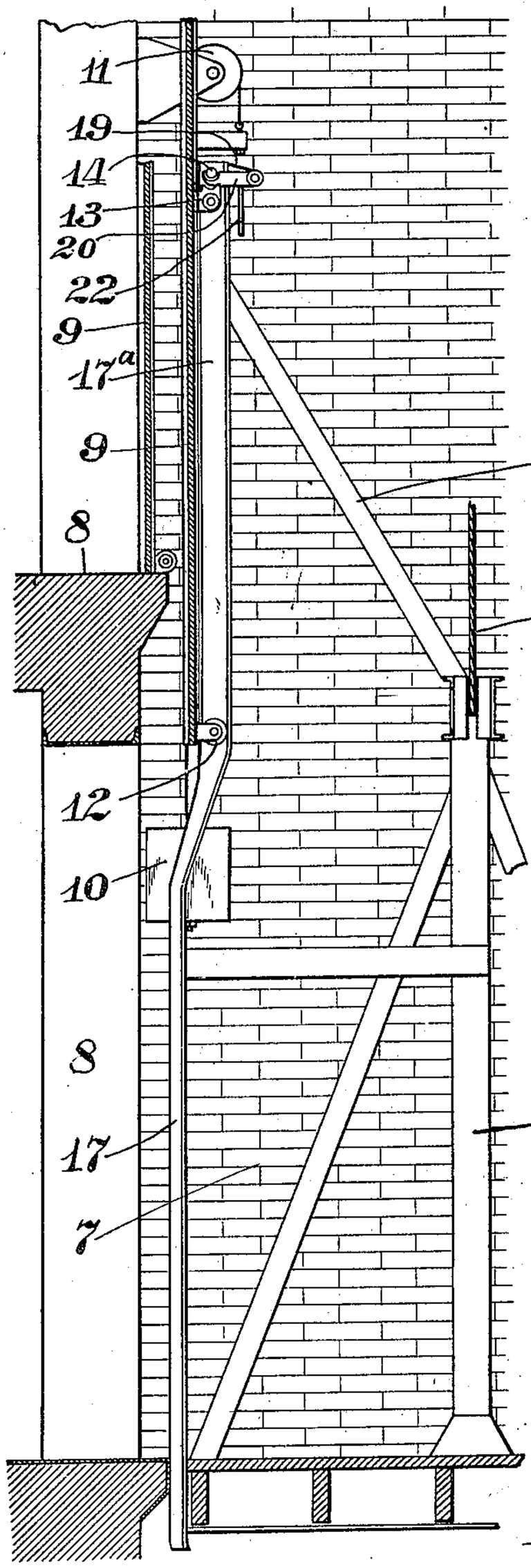

Fig. 1.

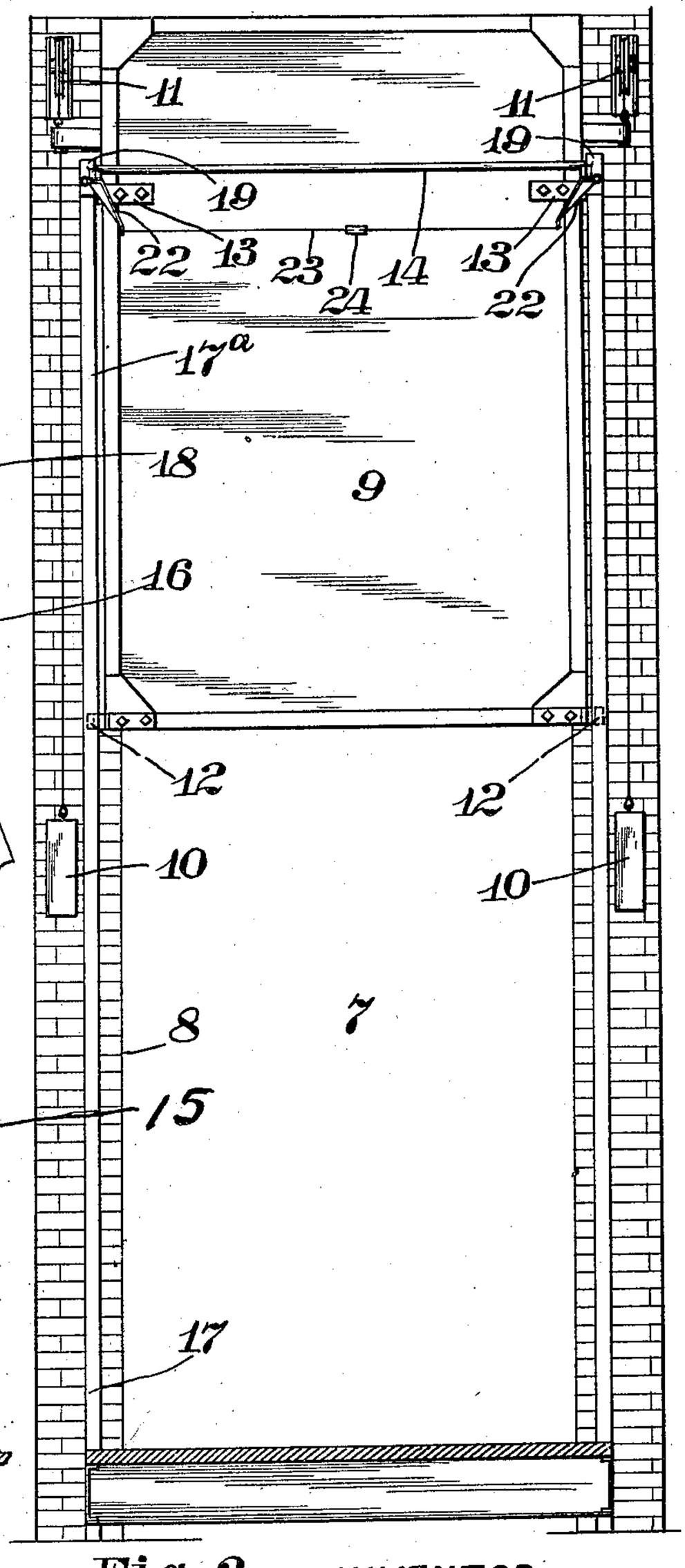

Fig. 2.

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Fig. 3.

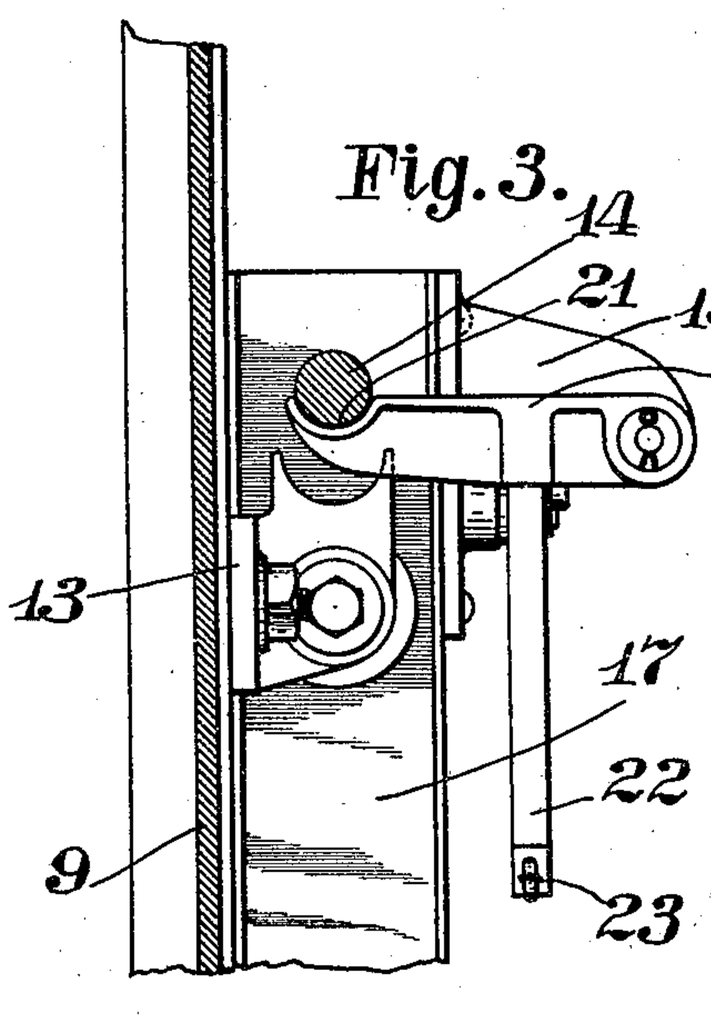


Fig. 4.

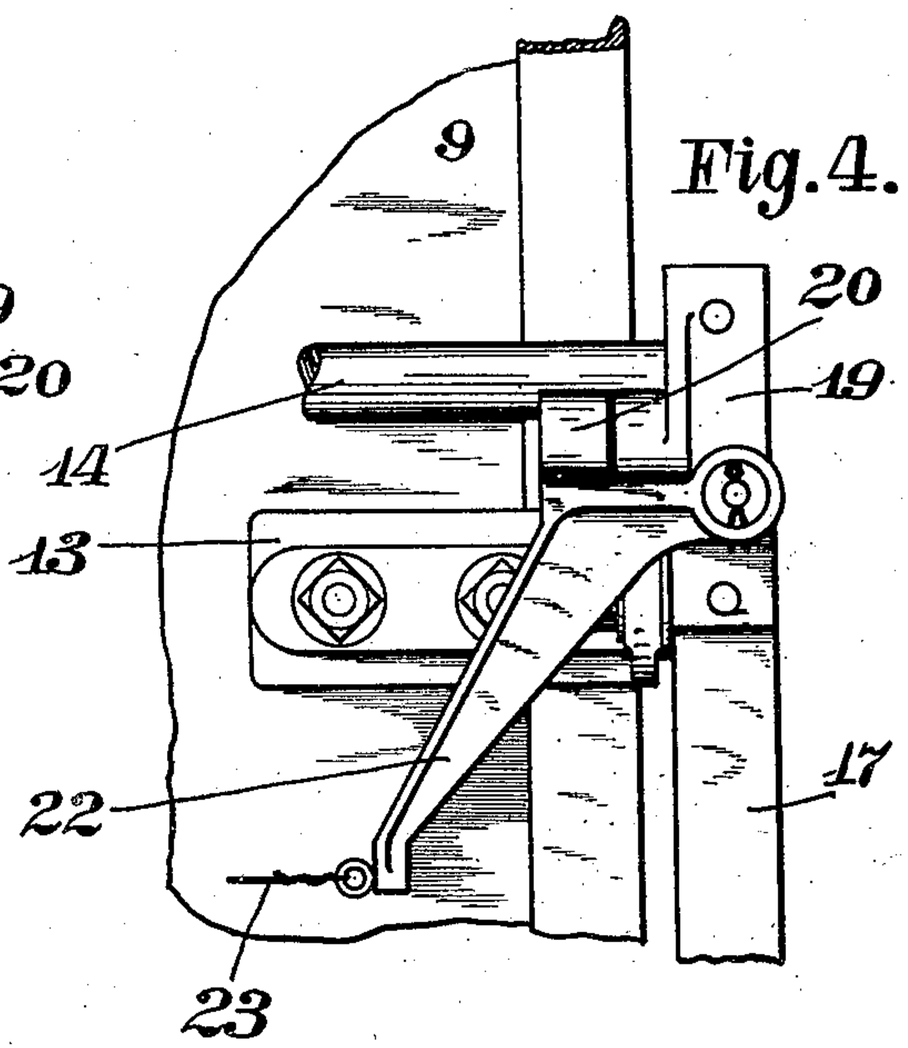
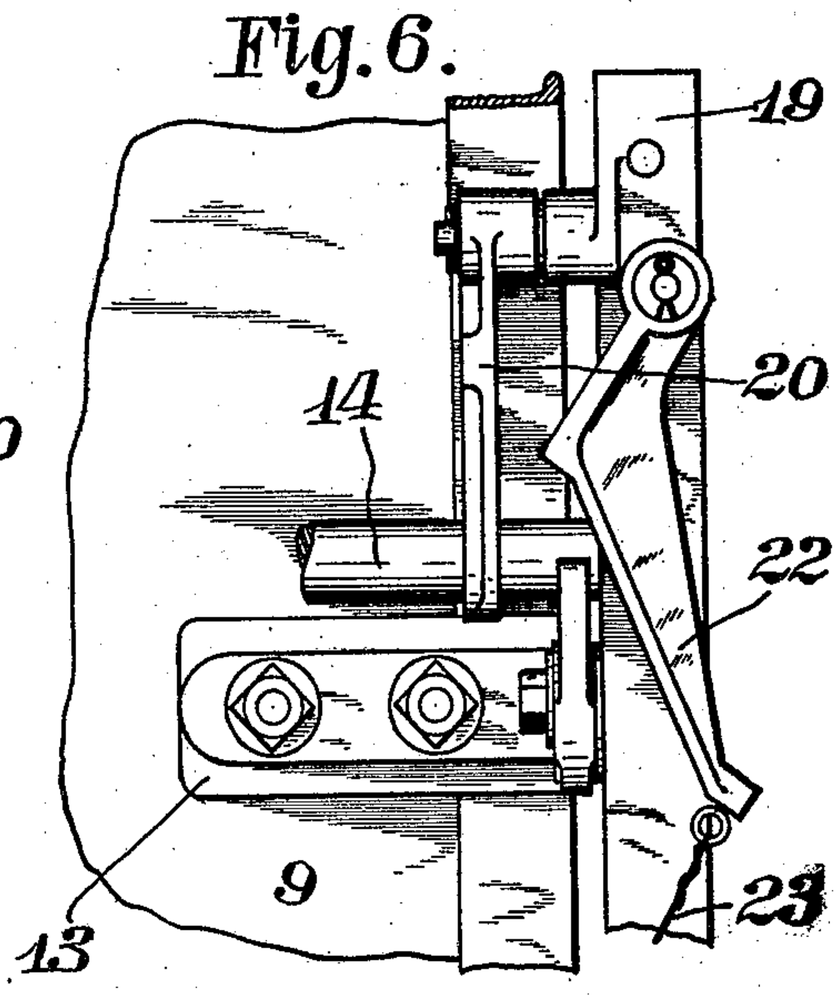


Fig. 6.



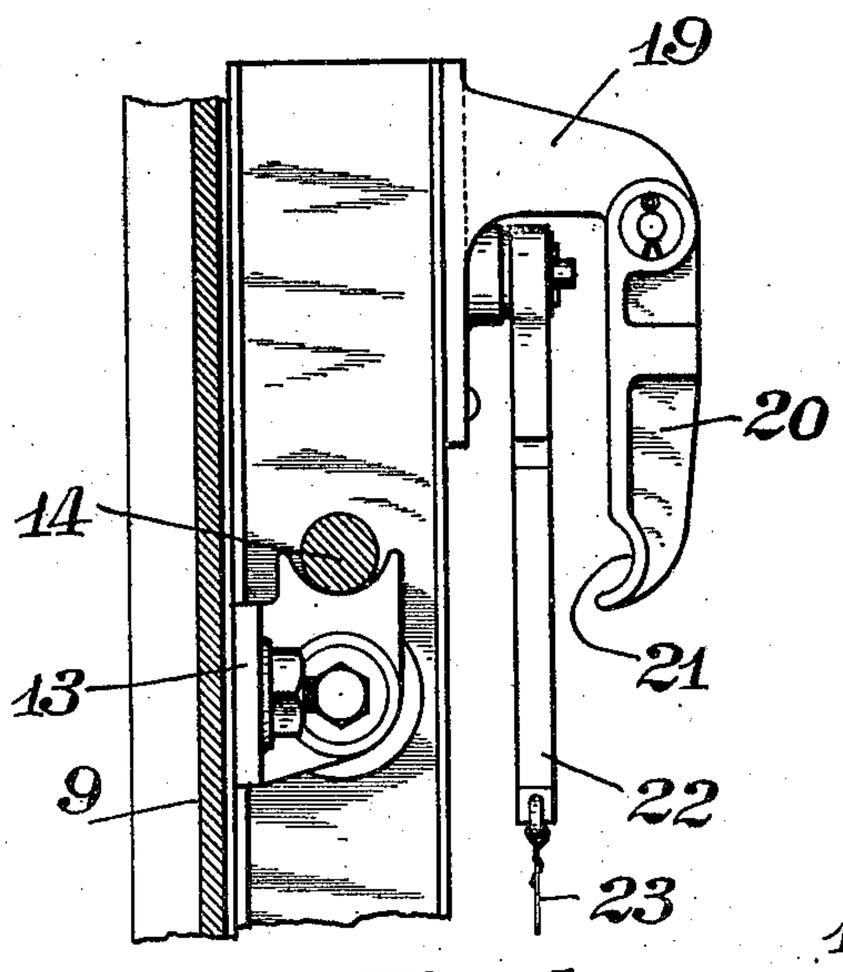


Fig. 5.

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Patented Nov. 18, 1924. 1,515,621

UNITED STATES PATENT OFFICE.

ALBERT RUSH, OF COLUMBUS, OHIO, ASSIGNOR TO THE KINNEAR MANUFACTURING COMPANY, OF COLUMBUS, OHIO, A CORPORATION OF OHIO.

MEANS FOR CLOSING DOORS FOR ELEVATOR SHAFTS.

Application filed August 26, 1922. Serial No. 584,391.

To all whom it may concern:

Be it known that I, ALBERT RUSH, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Means for Closing Doors for Elevator Shafts, of which the following is a specification.

This invention relates to an elevator door that is transferred when opened from the hatchway opening to the car. As the car is likely to be frequently vacated by the attendant and the door left in open position the object is to provide means for automatically closing the door in case of fire.

The invention is embodied in the example herein shown and described, the features of novelty being finally claimed.

In the accompanying drawing—

Figure 1 is a vertical sectional view taken at right angles to the elevator shaft doorways and showing one of the doors in raised position.

Fig. 2 is an elevation of the shaft looking toward a raised door.

Fig. 3 is a side view on a larger scale of the means for supporting the emergency or supplemental door weight, said weight being shown in cross section as in supported position.

Fig. 4 is a front view of the same.

Fig. 5 is a similar view showing the weight support and weight released.

Fig. 6 is a front view of the same.

In the views 7 designates the elevator shaft or well and 8 doorways thereto. 9 designates vertically moving doors to close said openings. The doors are to be equipped with counterbalancing weights 10 connected by cables with the door the cable being passed over sheaves 11 as best seen in Figs. 1 and 2. At its lower end the door is provided with laterally projecting stud shafts equipped with rollers 12 to travel on tracks on the car as hereinafter explained. The upper portion of each door is provided at each side with small brackets 13 adapted to receive and support in case of emergency a weight bar 14 ample to overcome the counterbalance weights of the door as hereinafter explained.

15 designates a portion of the car which is provided with a hoisting cable 16, as usual, for raising and lowering the car in the shaft. That side of the car adjacent the doorway opening is provided with upwardly extending bent tracks the lower portions of which 17 stand closer to the elevator doorway while the upper portions 17^a are set in away from the door to provide room for the door when raised. The upper portions 17^a of the tracks extend above the top of the car and are suitably braced in that position as by inclined rods 18, supported on the top of the car.

To the upper ends of the upper portions 17^a of the tracks and upon suitable brackets 19 secured to the tracks are pivoted arms 20 having their free ends formed with seats 21 adapted to receive the weight bar 14 before referred to, said weight bar adapted when added to the door to over-come the counterbalancing weights of the door and close the latter. The pivoted arms 21 are normally held in position to support the weight bar 14 by means of other arms 22 pivoted on the tracks the latter arms being connected by a wire 23 containing one or more fusible members 24 adapted to be melted by a dangerous rise of temperature, as for example, that of a nearby fire. Upon the occurrence of fire the weight 14 is transferred to the supports 13 on the door.

In practice, therefore, if a door is open as shown in Fig. 1 and the car left by the attendant as shown in that view and a fire occurs the melting of the fusible link will permit the weight bar 14 to be dropped onto the brackets 13 and the door thereby closed. As it is impracticable to leave more than one door open that door will be closed in case of fire.

The forms of the parts can be changed without departing from the invention as claimed.

What I claim is:

1. In a building, the combination with an elevator shaft provided with doorways and doors therefor, of a car movable in said shaft provided with thermally controlled means for closing a door.

2. In a building, the combination with an elevator shaft provided with doorways and doors therefor, of a car movable in said shaft provided with means to receive the door when at the doorway and thermally controlled means for closing the door.

3. In a building, the combination with an elevator shaft provided with doorways and vertically sliding doors for the same, of a

car movable in said shaft provided with a weight and thermally controlled means to release said weight to close an open door.

4. In a building, the combination with an elevator shaft provided with doorways and vertically sliding doors for the same, of a car movable in said shaft to any of said doors, said car provided with a weight and thermally controlled means to release the weight to close the door when the car is standing opposite the door.

5. In a building, the combination with an elevator shaft provided with doorways and counterbalanced vertically sliding doors for the same, of a car movable in said shaft to any of said doors, said car provided with a weight and thermally controlled means to release the weight to close the door when the car is standing opposite the door.

6. In a building, the combination with an elevator shaft provided with doorways and vertically sliding doors for the same, of a car movable in said shaft to any of said doors means on the car to receive the door, said car provided with a weight and thermally controlled means to release the weight to close the door when the car is standing opposite the door.

ALBERT RUSH.