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PATENTED FEB. 5, 1907.

L. E. HALE & A. M. FOX.

FOLDING DOOR FOR FIRE DEPARTMENTS AND OPENER THEREFOR.

APPLICATION FILED AUG. 15, 1905. RENEWED OCT. 1, 1906.

2 SHEETS—SHEET 1.

Fig. 2.

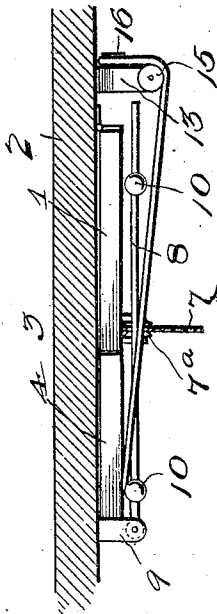


Fig. 5.

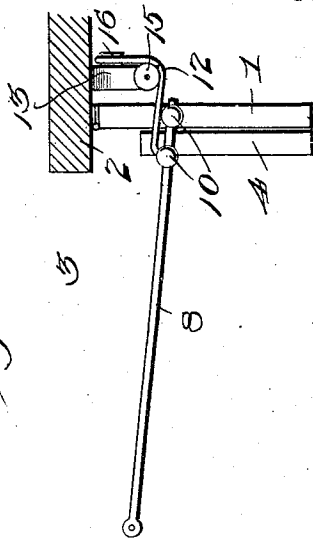
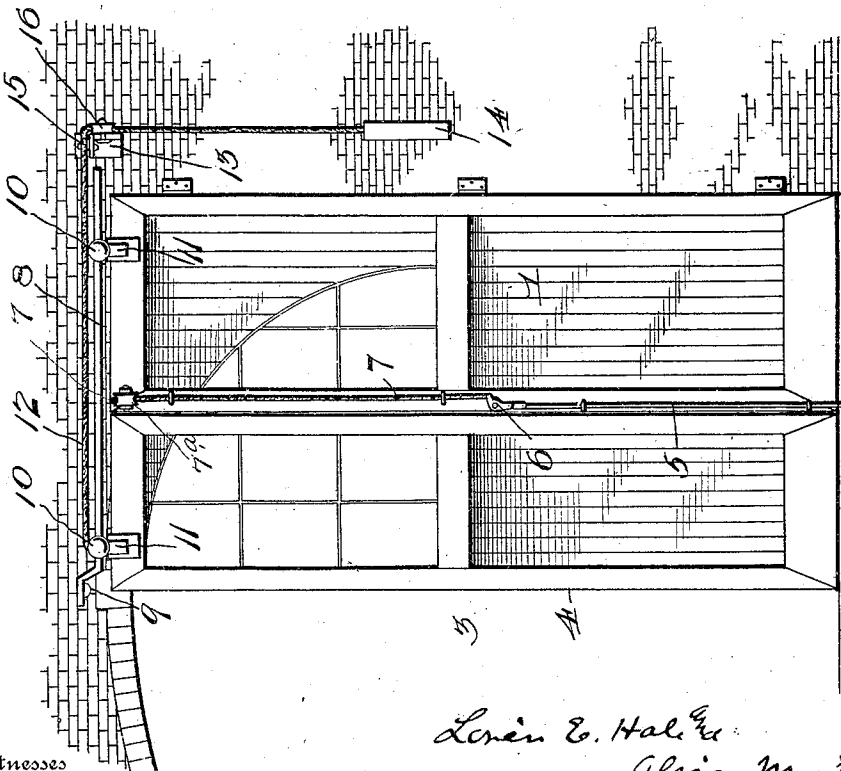


Fig. 1.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 4.

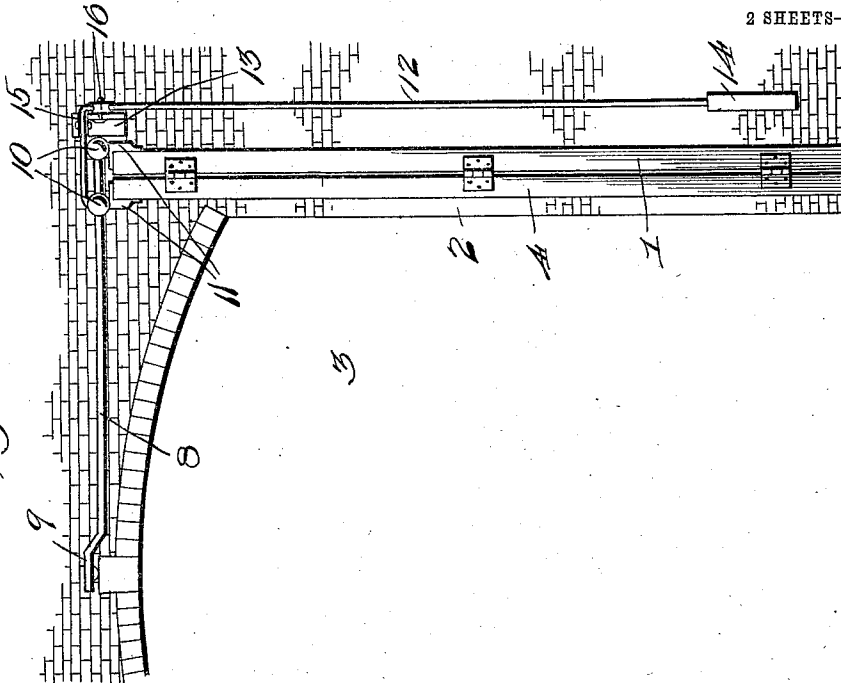
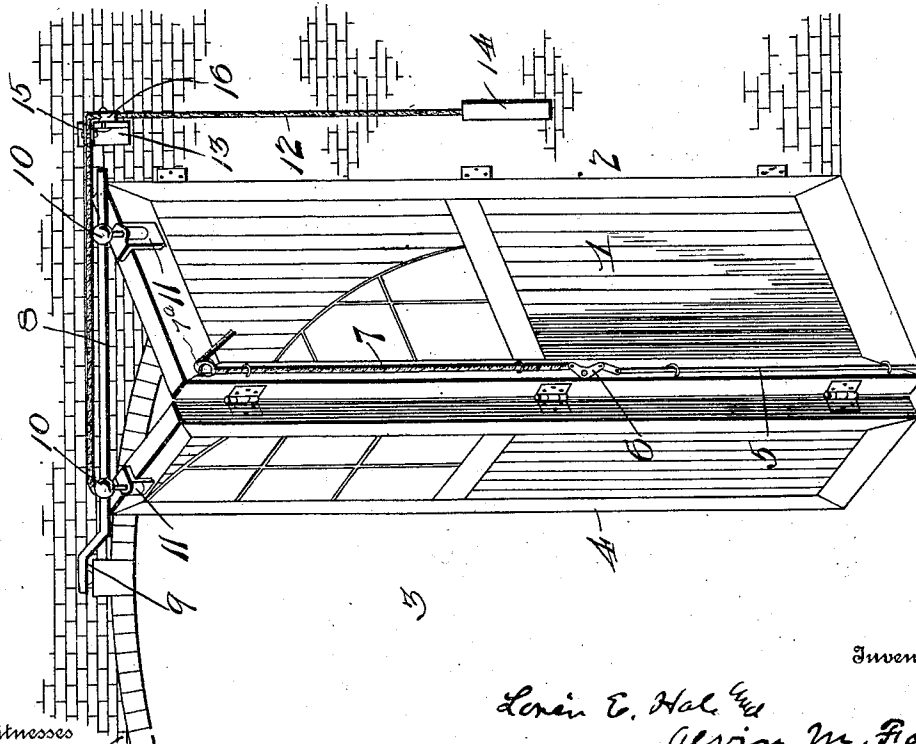


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

LORIN E. HALE AND ALVIN M. FOX, OF KANSAS CITY, MISSOURI, ASSIGNORS
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FOLDING DOOR FOR FIRE DEPARTMENTS AND OPENER THEREFOR.

No. 843,011.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed August 15, 1905. Renewed October 1, 1906. Serial No. 337,000.

To all whom it may concern:

Be it known that we, LORIN E. HALE and ALVIN M. FOX, citizens of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Folding Doors for Fire Departments and Openers Therefor; and we 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.

Our invention relates to improvements in fire-department folding doors and openers therefor.

It has for its object to provide doors which may be folded back, so as to leave the doorway entirely clear.

It has for its further object to provide means for locking the doors when closed and automatically opening said doors when the lock is released.

The invention consists in the features of construction and combinations of parts hereinafter described, and more particularly pointed out in the claims concluding this specification.

In the accompanying drawings, illustrating the preferred embodiment of our invention, Figure 1 is an elevation of one set of doors closed. Fig. 2 is a plan view thereof. Fig. 3 is a perspective view of the doors partly closed as in the act of being opened. Fig. 4 is an elevation showing the doors opened, and Fig. 5 is a plan view thereof.

While the preferred embodiment of our invention is illustrated in the accompanying drawings and its construction and operation are described herein, the right is reserved to make such changes from the construction shown and described herein as the scope of the claims hereto appended will permit.

Referring more particularly to the drawings, in carrying out our invention we hinge one of the doors 1 to the door-frame 2 far enough inward of the door-opening 3 to permit said door 1 and the other door 4, which is hinged thereto, when folded flat upon one another, to stand entirely within the casing or frame and leave the doorway unobstructed. It is understood that two sets or pairs of doors such as we have shown are used, one on each side of the doorway. The outside

door, which is hinged back from the edge of the frame, is wider than the inside door 4, as shown in Fig. 5.

A latch-rod 5 for locking the doors shut is arranged near the inner edge of the outside door and is adapted to be operated by the lever 6, pivoted to said door and in turn actuated by a card 7, running to the top of the door and over a pulley 7^a on the door, and another pulley (not shown) which may be secured to the ceiling within reach of the driver when he sits in the seat of the fire apparatus. A guide-bar 8 is pivoted to a bracket 9, secured about midway of the top of the door-frame. Said rod is pivoted so as to swing horizontally and passes through pivotally-mounted lugs 10, one on each door, mounted in brackets 11, secured to the inner top edges of the doors. Said rod forms an additional lock for the doors when closed and guides said doors to their open position, preventing the inside door from swinging too far inward.

To the lug 10 on the inside door 4 is fastened the end of the weight-cord 12, which runs through a bracket 13 on the inside of the door-frame and carries the weight 14, which opens the doors when the latch-rod is raised, and the doors are tripped by the driver pulling the latch-cord. Said bracket extends out from the wall and carries a horizontally-rotatable pulley 15 near its end, over which the cord passes, whereby said cord acts in a line substantially parallel to the guide-rod as the doors are opened. The bracket 13 carries a second pulley 16, capable of vertical rotation and hung near the wall. The cord passes over this pulley and thence drops toward the floor with the weight at the end.

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

1. A folding door, of the character described, comprising a plurality of members or doors, and a horizontally-pivoted guide-rod passing through pivotally-mounted lugs on the upper edges of said doors, for the purpose specified.

2. A folding door, of the character described, comprising a plurality of members or doors, a horizontally-pivoted guide-rod passing through pivotally-mounted lugs on

the upper edges of said doors, a cord secured to the lug on the inside door and running through a bracket extending out from the wall, so that said cord acts in a line substantially parallel with the guide-rod as the doors are being opened, and a weight on the end of said cord.

3. A folding door, of the character described, comprising a plurality of members or doors, a horizontally-pivoted rod passing through pivotally-mounted lugs on the upper edges of said doors, a cord carrying a weight on its end, said cord secured to the lug on the

inside door and running through a bracket on the wall, means to lock the door closed, and means for unlocking and tripping the door, extending in reach of the driver when in his seat on the fire apparatus.

In testimony whereof we affix our signatures in presence of two witnesses.

LORIN E. HALE.
ALVIN M. FOX.

Witnesses:

JAMES HUNTER,
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