No. 724,472. PATENTED APR. 7, 1903.

M. HEGBOM.

HATCHWAY DOOR.

APPLICATION FILED FEB. 15, 1901.

NO MODEL. 2 SHEETS—SHEET 1.

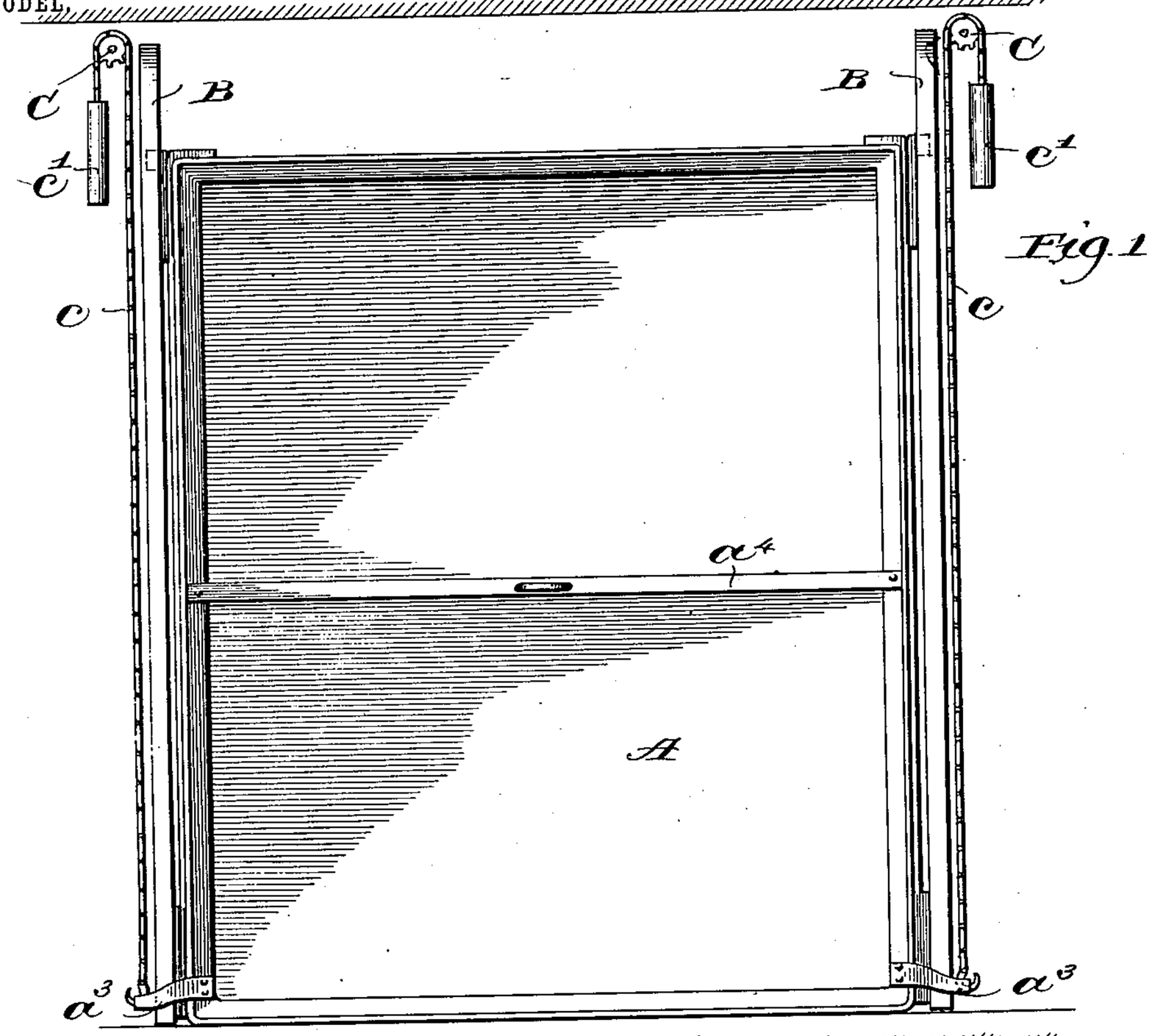

Fig. 1

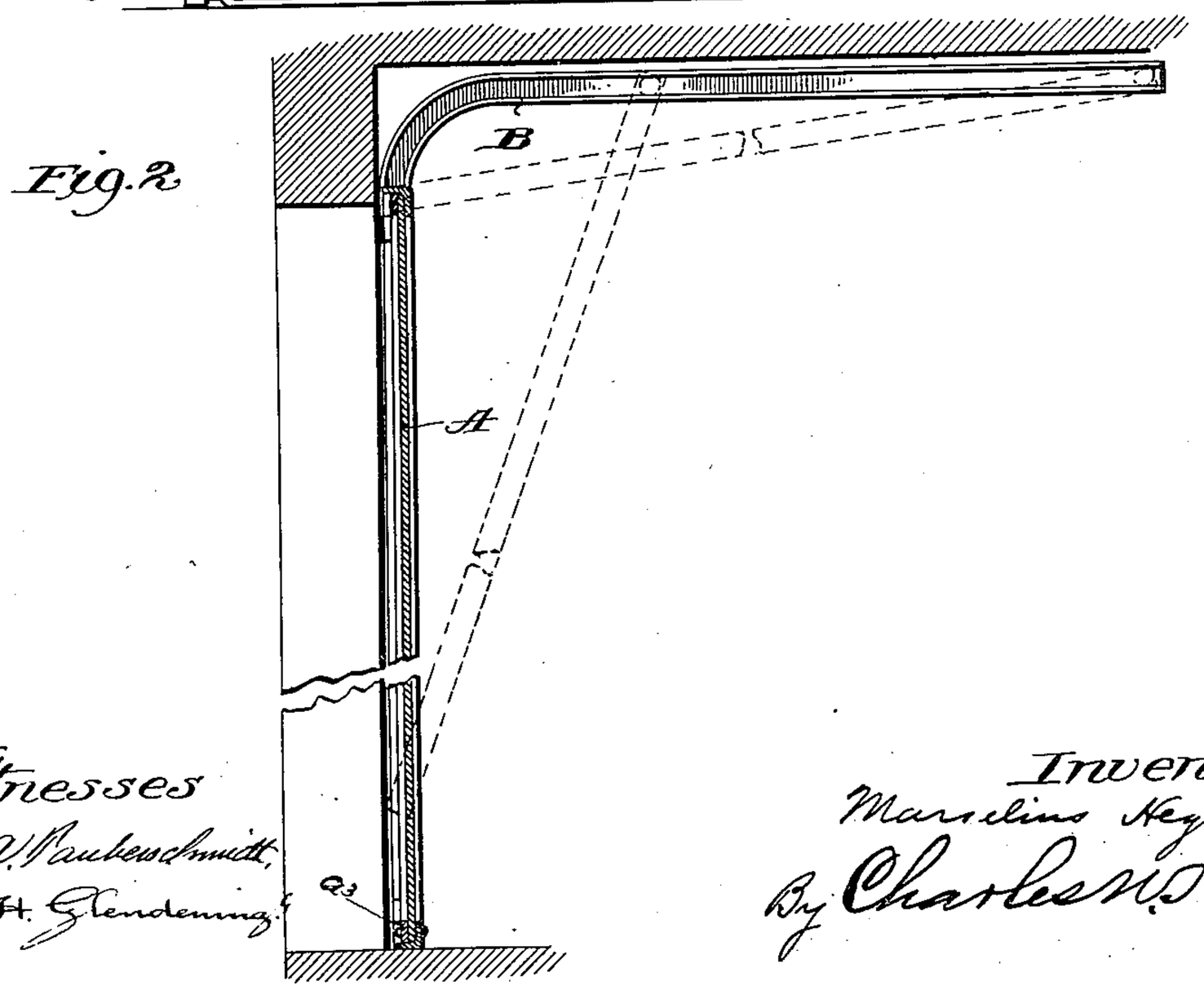

Fig. 2

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3

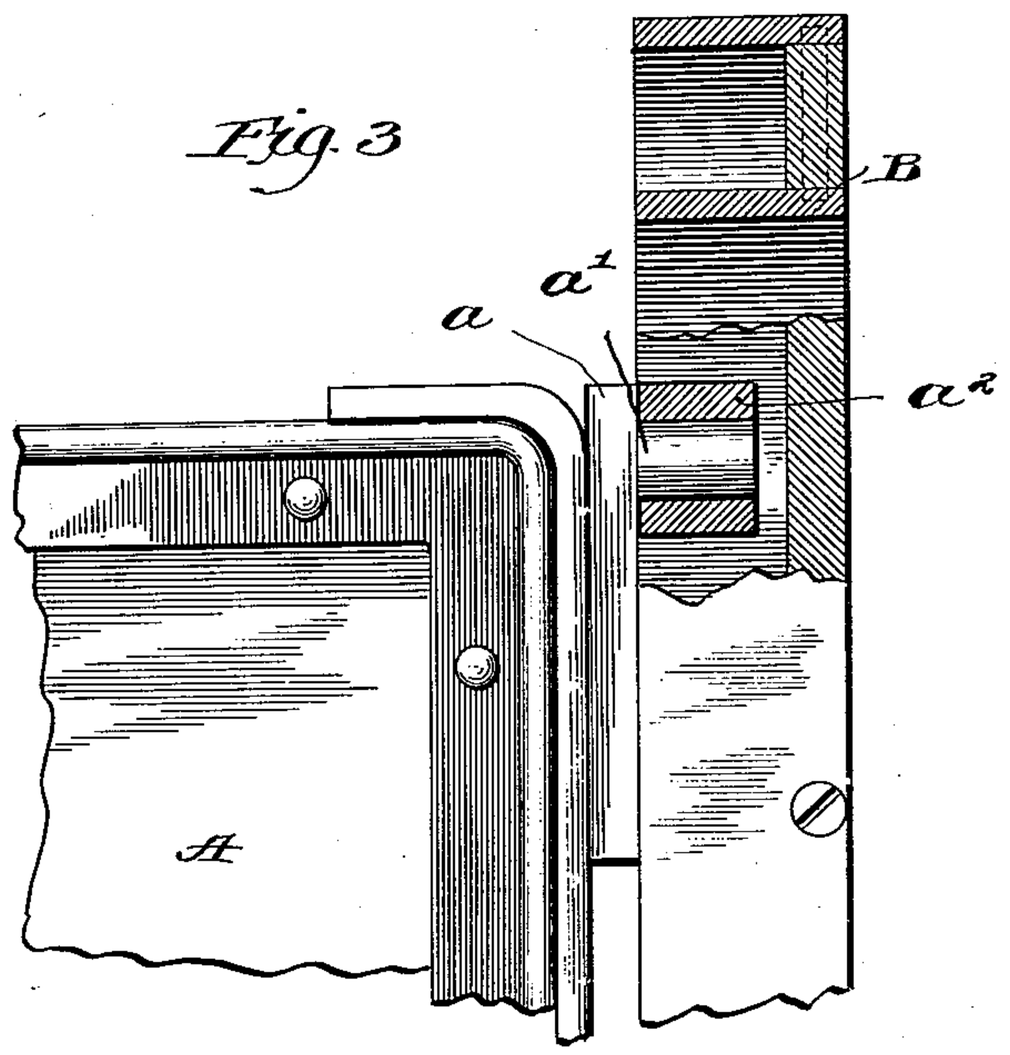


Fig. 4.

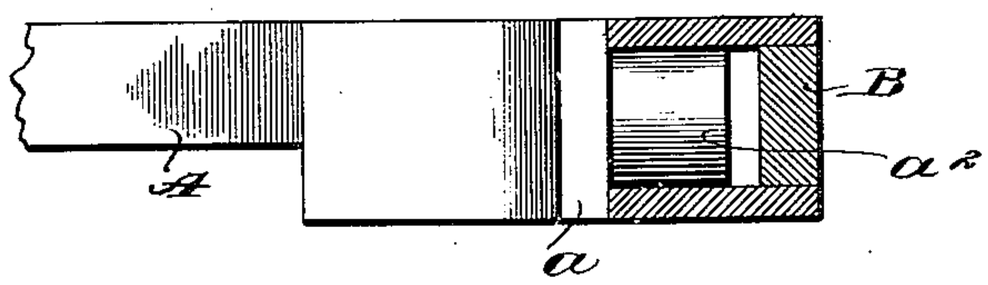
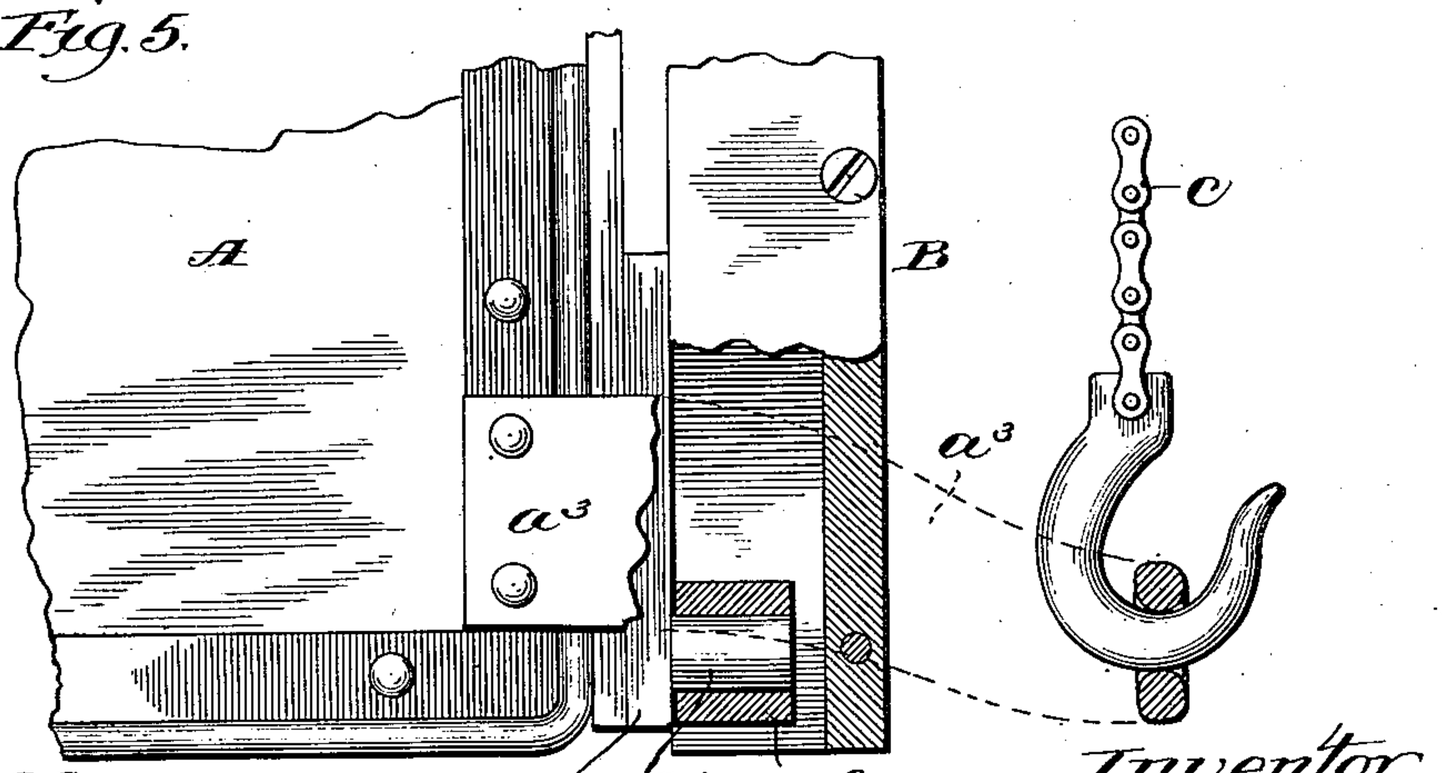


Fig. 5.



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UNITED STATES PATENT OFFICE.

MARSELIUS HEGBOM, OF CHICAGO, ILLINOIS, ASSIGNOR TO FREDERICK VOSS, OF CHICAGO, ILLINOIS.

HATCHWAY-DOOR.

SPECIFICATION forming part of Letters Patent No. 724,472, dated April 7, 1903.

Application filed February 15, 1901. Serial No. 47,421. (No model.)

To all whom it may concern:

Be it known that I, MARSELIUS HEGBOM, a citizen of the United States, and a resident of Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Hatchway-Doors; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in hatchway-doors, and more particularly to doors designed to be used in spaces where but a small amount of head-room can be secured.

The invention consists of the matters hereinafter described, and more fully pointed out and defined in the appended claims.

In the drawings, Figure 1 is a front elevation of a device embodying my invention, showing the door closed. Fig. 2 is a vertical section of the same. Fig. 3 is an enlarged detail, partly in section, showing one of the upper corners of the door and part of the track broken away. Fig. 4 is a fragmentary top plan view, partly in section. Fig. 5 is a detail, partly in section, of one of the lower corners of the door.

As shown in said drawings, A indicates a door, preferably metallic and, as shown, constructed in one piece and designed to close an aperture in a wall or partition of approximately the same length and breadth. On the inner side of said wall or partition, or that side on which the door is secured, are provided tracks B, which may be constructed of any desired material, but, as shown, are constructed of channel-iron, the lower ends of which are rigidly secured to the floor and which extend upwardly to the top of the door-opening, from which point said tracks curve upwardly and inwardly, and the upper end portions thereof lie horizontally at a right angle with the plane of the door and in close proximity to the ceiling, as shown in Fig. 2. Said door fits closely against the wall, entirely closing the opening therein, and is provided on each of its lateral edges with brackets a, each provided with the horizontally-extending arm a', to which is rotatably secured a roller a^2, which fits closely in one of said tracks, as shown in Figs. 3 and 4. Said rollers are provided at the bottom and top of the door on each side thereof, so that when the door is closed said track rigidly supports the same against inward pressure. At the lower corners of said door are the laterally-directed brackets a^3, rigidly secured thereon, which extend, as shown, between the corresponding track and the wall, as shown in Fig. 2.

C C indicate pulleys rotatively secured on the wall and over which are trained the chains or flexible connections c c, the lower ends of which are secured, respectively, to the brackets a^3 a^3 by means, as shown, of a hook. The other end of said flexible connection is provided with a counterweight of any desired form and materially lighter than the door. Said door may be of any preferred construction. As shown, however, the same is constructed of sheet metal, which may be corrugated, if preferred, and bound upon its margin with angle-iron, as shown in Figs. 1 and 2, the flanges of said angle-iron forming a continuous surface on which to secure the respective supporting parts. A strengthening cleat or stay a^4 extends across the middle of the door, and a handle is provided centrally thereon, as indicated in Fig. 1.

The operation of my device is as follows: The door when closed, as indicated in Fig. 1, being heavier than the two weights b' b' will remain closed until an upward pressure is brought to bear thereon, whereupon the upper rollers serve along the channel of the track and the top of the door swings inwardly, as shown in dotted lines in Fig. 2. Inasmuch as the top of the door is now supported on the horizontal portion of the track, the weights have only to lift the lower portion of the door. In consequence the lower end of the door naturally slides upwardly until the bottom of said door reaches a level with the top of the door-opening. No catch or other device will be necessary to retain the door in such position, inasmuch as the entire gravity of the weights is now exerted in supporting the lower end of the door. When it is desired to close the door, a slight downward pull at the bottom suffices to move the lower end of the

same downwardly in the track and cause the upper end thereof to move toward the wall until the door is in the position shown in Fig. 1.

Obviously many details of construction may be varied without departing from the principle of my invention, and doors of any desired shape and tracks either of channel or of angle iron may be used, as preferred.

I claim as my invention—

1. The combination with a sheet-metal door, having metal reinforced edges, of a curved track located on each side of the same, rollers on each side of the door at the top and bottom thereof which engage in said track whereby said door is adapted to slide upwardly in a position at an angle with its plane in its closed position.

2. In a device of the class described, the combination with a sheet-metal door, of an angle-bar rigidly secured around the margin thereof, rollers projecting laterally therefrom near the top and the bottom, a curved channeled track adapted to receive said rollers and rigidly secured with one end portion approximately parallel with the plane of the door-opening and the other end portion directed at approximately a right angle therewith whereby said door is adapted to slide upwardly to a position at a right angle with its plane in its closed position, and gravity-acting means acting to move said door to its open position.

In witness whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

MARSELIUS HEGBOM.

In presence of—
C. W. HILLS,
LOUIS J. DELSON.