

(No Model.)

A. H. P. LEUF.
HANGING DOORS.

No. 294,476.

Patented Mar. 4, 1884.

Fig. 1.

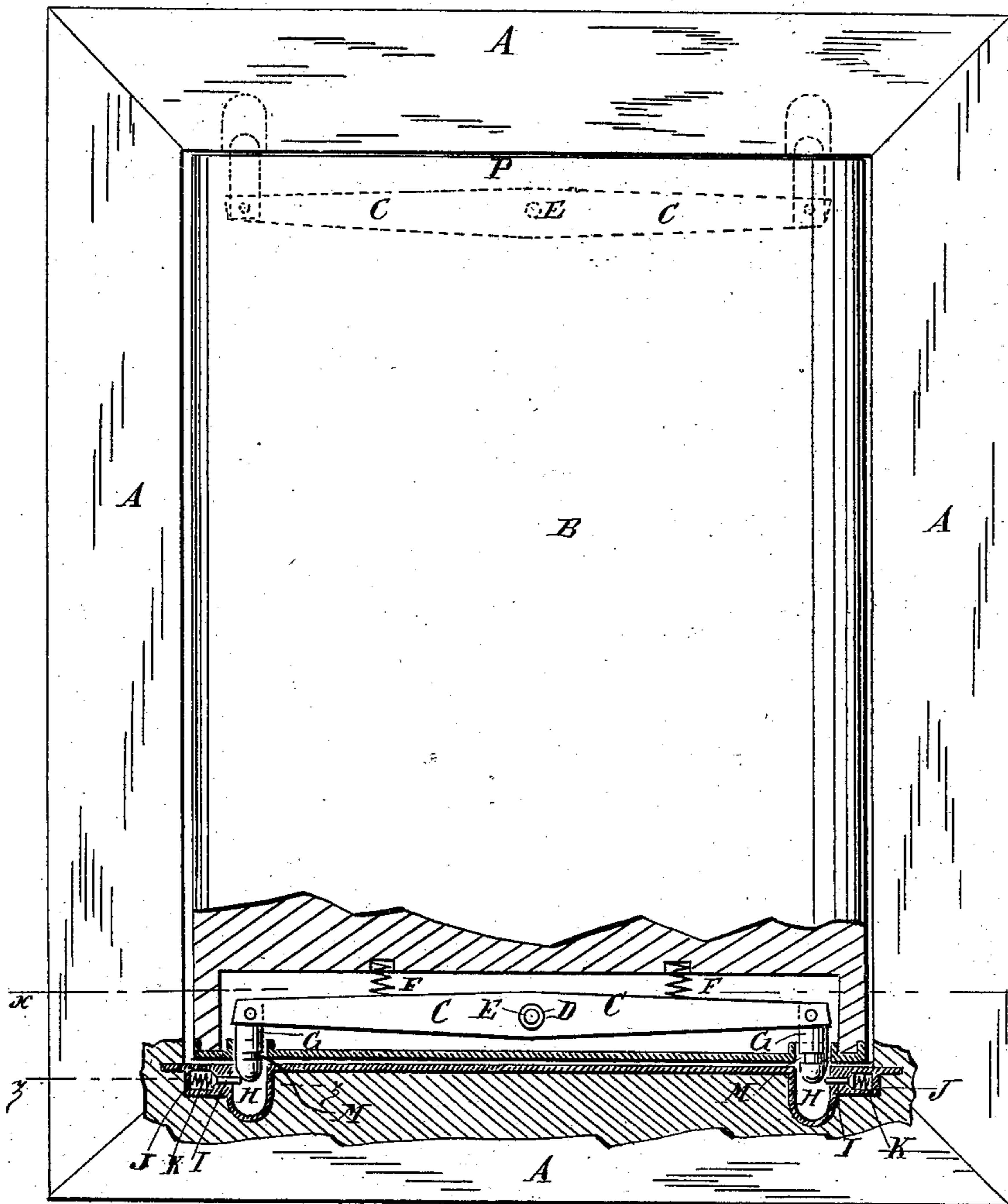


Fig. 2.

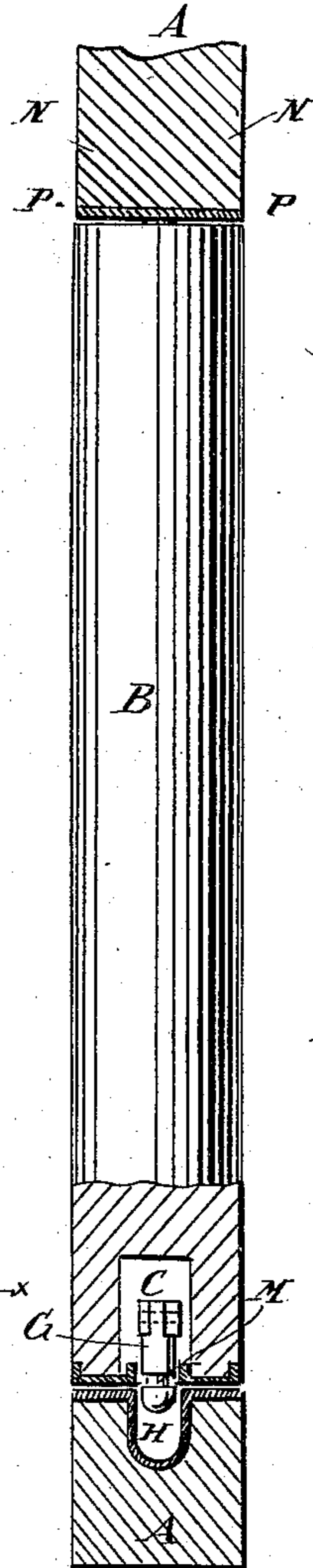


Fig. 3.

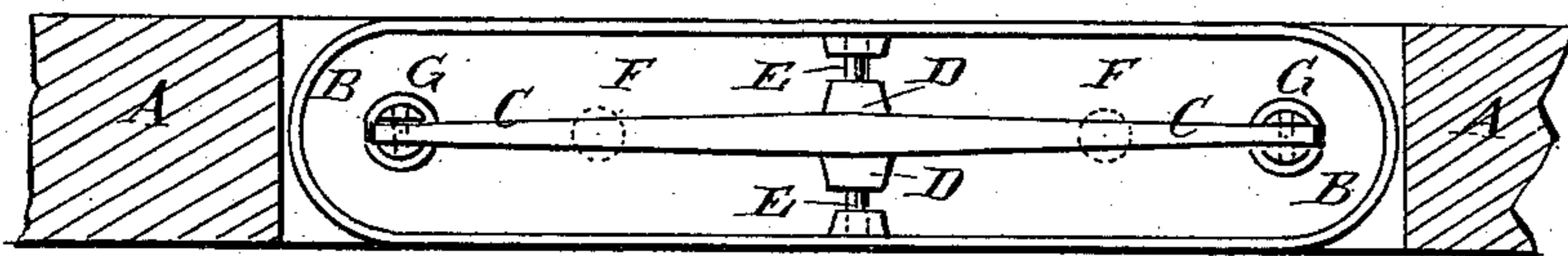
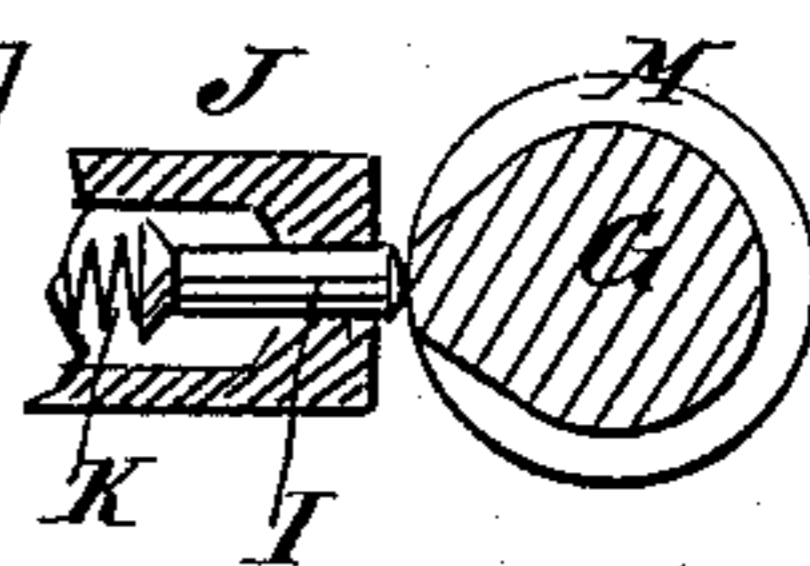


Fig. 4.



WITNESSES:

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ALEXANDER H. P. LEUF, OF BROOKLYN, NEW YORK.

HANGING DOORS.

SPECIFICATION forming part of Letters Patent No. 294,476, dated March 4, 1884.

Application filed August 4, 1883. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER H. P. LEUF, of the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Hanging Doors, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional front elevation of my improvement shown as applied to a door and door-casing, parts being broken away. Fig. 2 is a sectional side elevation of the same, the casing being shown in section and the door in edge view, with part broken away. Fig. 3 is a sectional plan view of the same, taken through the line *x x*, Fig. 1. Fig. 4 is a sectional plan view of a part of the same enlarged, taken through the line *z z*, Fig. 1.

The object of this invention is to hang doors in such a manner that they can be opened from either side in either direction, and at either edge.

The invention consists in the cross-bars pivoted in recesses in the ends of the door, and having pivots hinged to their ends to engage with sockets let into the door-casing, whereby the door can be opened in either direction and from either edge. The pivoted cross-bars, when left free, are held in horizontal positions by springs interposed between the said cross-bars, between their centers and ends, and the bottoms of the recesses in which the said cross-bars are placed. The pivots, while serving as hinges, are locked in place by spring-pressed bolts, which enter grooves in the said pivots, as will be hereinafter fully described.

I will describe my invention as applied to doors, but do not limit myself to that use, as it can be applied to window-shutters and to other uses with equal advantage.

A represents a door-casing, and B represents a door. The upper and lower edges of the door B are recessed, and in the spaces thus formed are pivoted cross-bars or equal-armed levers C. The centers of the cross-bars C are thickened or are provided with projections or hubs D, to give long bearings to the pivots E and

prevent the cross-bars from having any lateral movement. The cross-bars C, when left free, are held in horizontal positions by spiral or other springs F, interposed between the said bars, about midway between their centers and ends, and the bottoms of the recesses in which the said bars are pivoted.

To the ends of each bar C are hinged large pivots G, the outer ends of which are rounded, as shown in Figs. 1 and 2, and enter sockets H, let into the base and top of the casing A, the said pivots being made of such a length that when the cross-bars C are in horizontal positions the bases of the rounded ends of the said pivots will be at the mouths of the sockets, so that a strong push in either direction against either edge of the door will cause the pivots G adjacent to that edge to be pushed inward by the pressure of the edges of the mouths of the sockets H against the sides of the rounded ends of the said pivots, which movement causes the other pivots G to be projected into their sockets H for the door to turn upon.

I are small bolts placed in sockets or keepers J at the outer sides of the sockets H, and with their forward ends projecting into the interior of the said sockets H, and which are pressed forward by small spiral springs K, placed within the sockets J, with their ends resting against the ends of the said bolts I.

In the pivots G, in such positions as to be opposite the ends of the bolts I when the said pivots G are forced into the sockets H, are formed grooves M, which extend nearly around the said pivots, as shown in Fig. 4, the ungrooved parts of the pivots G being opposite the ends of the small bolts I when the door B is closed or wholly within the casing A. With this construction the pivots G, upon which the door is turning, will be locked in place while serving as hinges, so that it will be impossible for the door to be thrown down or displaced by a heavy push. As the door in being closed enters the casing, the bolts I come opposite the ungrooved parts of the pivots G, and the bars C return to a horizontal position.

I do not abandon or dedicate to the public any patentable feature set forth herein and not hereinafter claimed, but reserve the right

to claim the same either in a reissue of any patent that may be granted upon this application or in other applications for Letters Patent that I may make.

5 Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the door B, having recessed ends, and the door-casing A, of the pivoted cross-bars C, hinged pivots G, and
10 the sockets H, substantially as herein shown and described, whereby the said door can be opened in either direction and from either edge, as set forth.

2. The combination, with the door B, having recessed ends, and the pivoted cross-bars

C; of the springs F, substantially as herein shown and described, whereby the said cross-bars, when left free, will be held in horizontal positions, as set forth.

3. The combination, with the pivoted bar 20 C, provided with the pivots G, having grooves M, and the sockets H, of the bolts I and the springs K, substantially as herein shown and described, whereby the said pivots, when serving as hinges, will be locked in their sockets, 25 as set forth.

A. H. P. LEUF.

Witnesses:

WM. H. FARRINGTON,

C. THEO. SAUER.