A. Wiswall,

Door Spring.

No. 57,240. Patented Aug. 14, 1866.

Fig: 1.

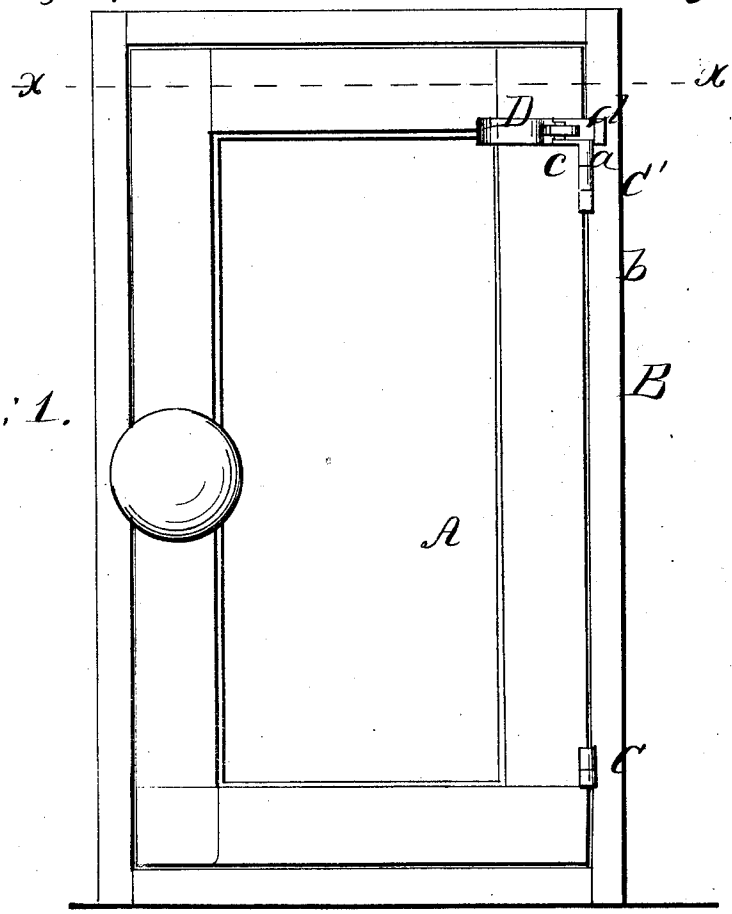
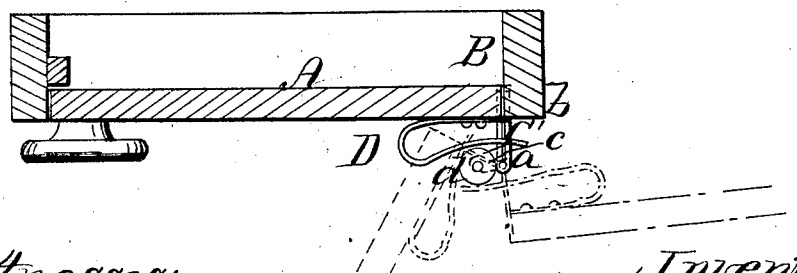


Fig: 2.



Witnesses;

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UNITED STATES PATENT OFFICE.

ALVAH WISWALL, OF NEW YORK, N. Y.

IMPROVEMENT IN DOOR-SPRINGS.

Specification forming part of Letters Patent No. **57,240**, dated August 14, 1866.

To all whom it may concern:

Be it known that I, ALVAH WISWALL, of the city, county, and State of New York, have invented a new and useful Improvement in Hinges for Gates and Doors; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a view of a door in a closed state with my improvement applied to it; Fig. 2, a horizontal section of the same, taken in the line *x x*, Fig. 1.

Similar letters of reference indicate like parts.

This invention consists in applying a spring to one or both of the hinges of a door or gate in such a manner that the spring or springs will have a tendency to close the door or gate after being opened for a person to pass through, and when the door or gate is opened farther than is necessary for this purpose have a tendency to keep it open.

A represents a door, and B the door-frame, having nothing peculiar in their construction. C represents the lower hinge, which may be of the ordinary kind, and C′ is the upper hinge, the part *a* of which—the part secured to the side *b* of the door-frame B—is formed with a horizontal plate, *c*, which projects out from the frame and has a roller, *d*, secured upon it. (See more particularly Fig. 2.)

D is a spring, which is attached to the door A, and is composed of a flat steel strip bent in U form. This spring is attached to the door in line with the roller *d*, and the latter has such a relative position with the door and spring that the spring will be compressed when the door is opened to a certain extent, sufficient to allow a person to pass through, as shown in red in Fig. 2, and the spring therefore have a tendency to close the door after a person has passed through, and when the door has fully opened have a tendency to keep the door in an open state, as shown in blue, Fig. 2.

The roller *d* obviates friction and causes the spring to operate perfectly at all times, and the spring is not subjected to any undue strain at any point in the door's movement. The U form is also a desirable shape for the spring, rendering it durable and not liable to be affected by use.

I am aware that springs have been applied to door and gate hinges to effect the same result as the one herein shown and described; but they have not been generally adopted on account of their liability to get out of order and the friction attending their operation—difficulties fully obviated by improvement.

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

The U-shaped spring D, attached to the door or gate, in combination with the roller *d*, attached to a plate, *c*, projecting from the door-frame, or from the part *a* of the hinge attached thereto, and all having such a relative position with each other to operate in the manner substantially as and for the purpose set forth.

The above specification of my invention signed by me this 14th day of April, 1866.

ALVAH WISWALL.

Witnesses:

WM. F. MCNAMARA,

ALEX. F. ROBERTS.