

C. Vetter,
Spring Hinge,

No 70,921,

Patented Nov. 12, 1867.

Fig. 1.

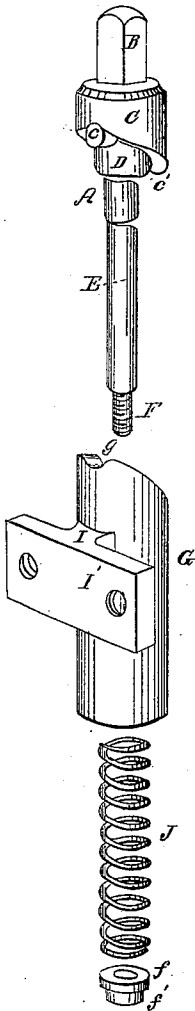
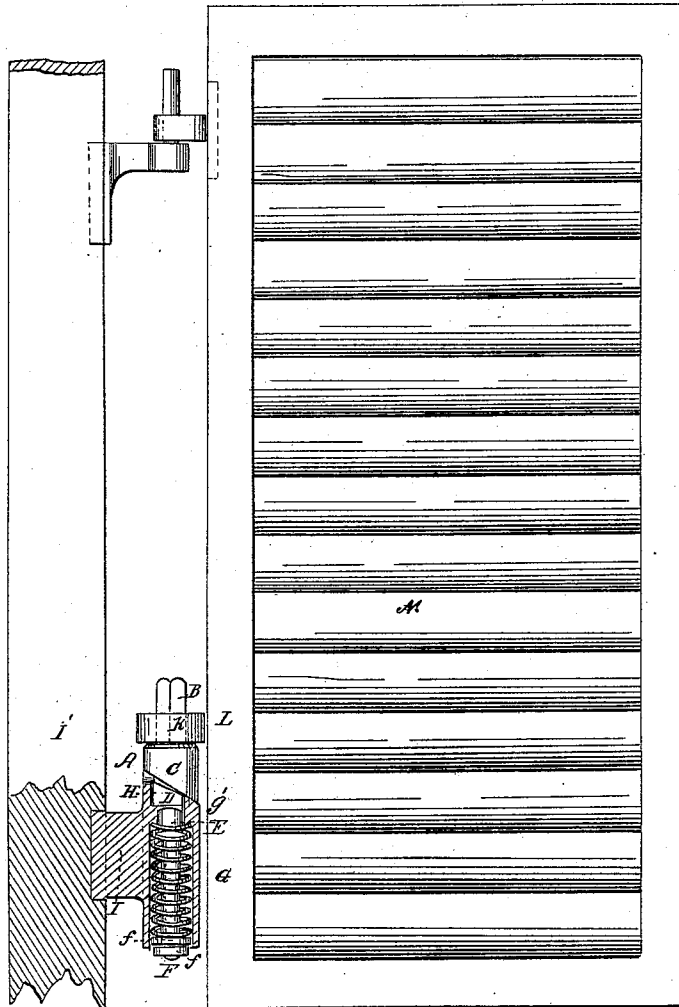


Fig. 2.



Witnesses:
Fred. Bachman
Carl Millward

Inventor:
C. Vetter
By G. M. H. W. S.
Att'y.

United States Patent Office.

CASPAR VETTER, OF CINCINNATI, OHIO, ASSIGNOR TO HIMSELF AND
PETER SCHNEIDER, OF SAME PLACE.

Letters Patent No. 70,921, dated November 12, 1867.

IMPROVED SELF-CLOSING HINGE.

The Schedule referred to in these Letters Patent and making part of the same.

TO WHOM IT MAY CONCERN:

Be it known that I, CASPAR VETTER, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Self-Closing Hinge for Doors and Shutters; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

This invention relates to a hinge in which a spring and the force of gravity act in unison to close the door or shutter to which it may be attached.

Figure 1 is a perspective view of the several parts of my hinge detached.

Figure 2 shows a door-post and door furnished with a hinge of my invention.

A is a spindle, having a rectangular top, B, collar, C, shoulder, D, and a reduced part, E, ending in a screw, F, on which is passed a washer, *f*, and screwed a nut, *f'*. G is a socket-piece, having an interior shoulder, *h*, above which the bore H is reduced. The socket-piece G is furnished with a plate or shank, I, for its attachment to the door-post or stile I'. J is a spiral spring surrounding the reduced part E of the spindle, operating against the shoulder *h* at one end, and the washer *f* at the other, to draw the spindle down within the socket. The upper part of the socket G has a rounded recess, *g*, over the shank I, and from the elevations on each side of this recess it gradually descends on each side to a concave angle on its opposite side *g'*. The lower side of the collar C is formed to fit the upper face of the socket, and the part of the spindle between the collar C and shoulder D fits the bore H in the socket. The collar has prominences *c* and *c'* to suit the concavities *g* and *g'* on the socket. The rectangular top B of the spindle fits and is received into a suitable socket, K, upon the part L of the hinge, which part is attached to the door M.

It will be observed that my hinge admits of the door swinging in either direction, and gravitates to the point desired. The top B is shown as having four sides, but may have any number over two, which allows of the door being placed upon the spindle so as to gravitate to any position, the socket K being made of suitable form to fit the top of the spindle.

The operation of the hinge is as follows: When the door is shut, the contiguous surfaces of the socket G and collar C fit each other around their whole face, the spring J and the weight of the door operating to keep the said door closed. When the door is being opened, only the most salient part *c* of the lower edge of the collar rests upon the upper face of the socket, and the door is gradually raised, and the spring J compressed by the said action of opening the door, and upon its release the force of gravitation and the pressure of the spring speedily close the door. The door, when closed, is held in exact position, more especially by the prominence *c* and recess *g* upon the socket and collar respectively.

I claim herein as new, and of my invention—

1. The combination, with a self-closing door or shutter-hinge, operating by gravitation and by a spring, substantially as shown, of the angular or non-circular top or head B and socket K, permitting the door, when mounted, to gravitate to any desired position, as described.

2. In combination with the spring J, I claim the inclined edges upon collar C and socket G, having depressions *g g'* and prominences *c c'*, substantially as shown and described.

In testimony of which invention I hereunto set my hand.

Witnesses:

HOWARD DOUGLASS,
GEO. H. KNIGHT.

CASPAR VETTER.