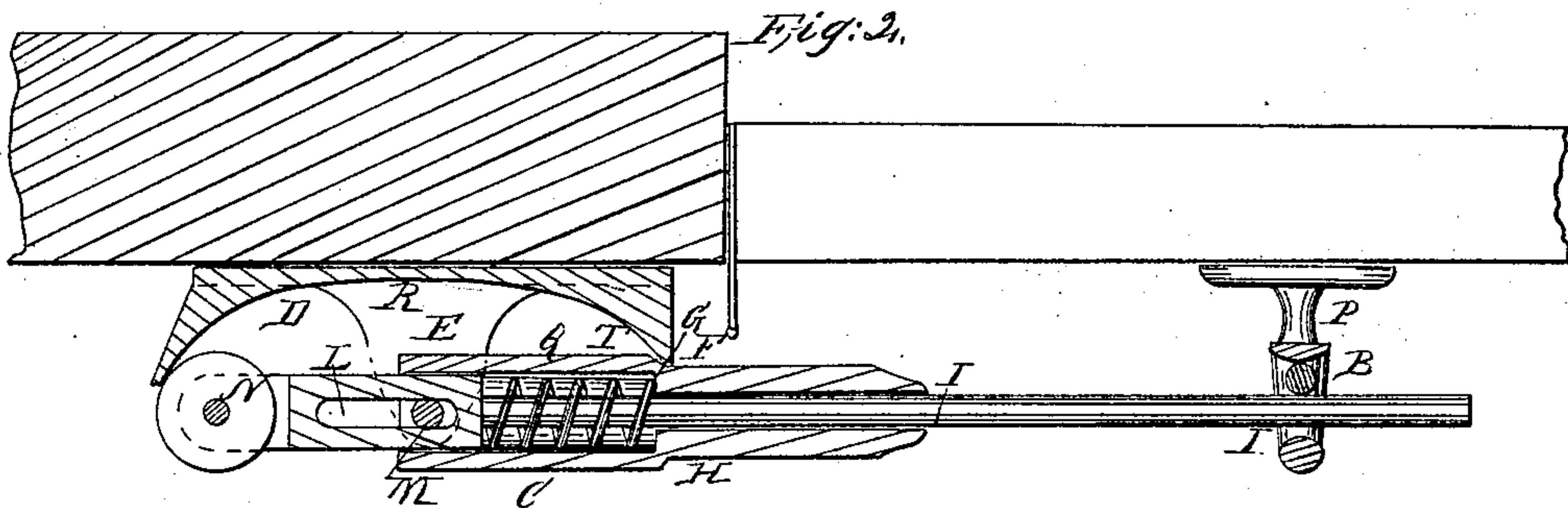
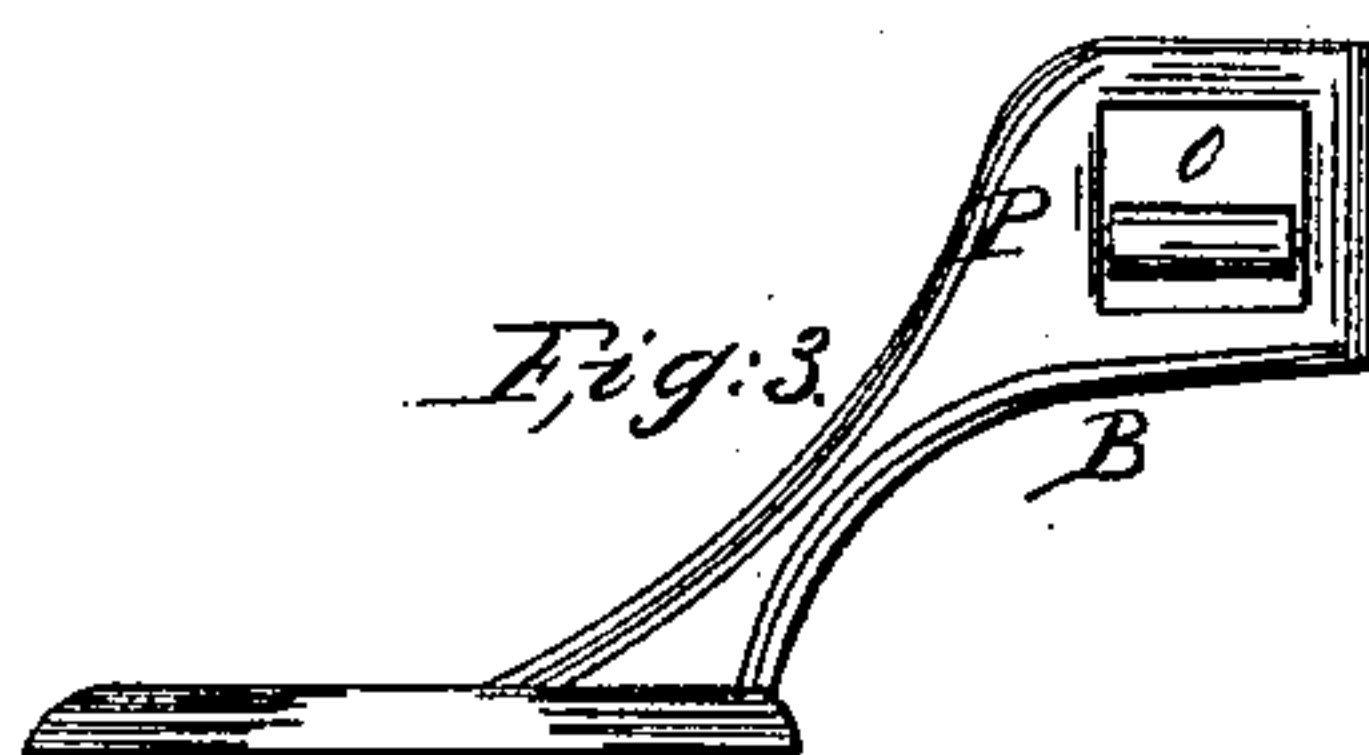
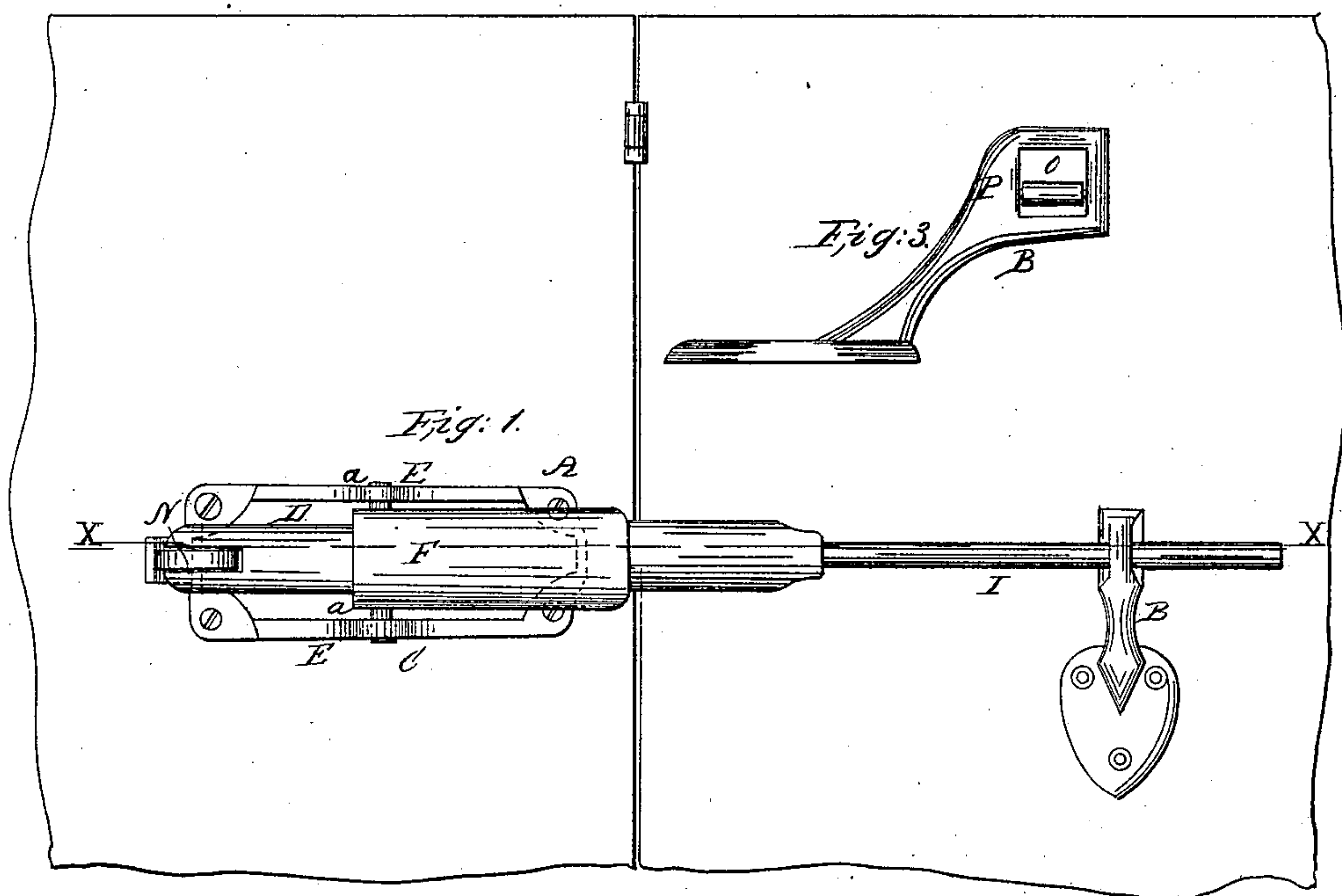


*J. M. Newton,*

*Door Spring.*

*N<sup>o</sup> 66,873.*

*Patented July 16, 1867.*



*Witnesses*  
*Thos. Finch*  
*J. A. Service*

*Inventor:*  
*J. M. Newton*  
*Per. [Signature] Attorney*

# United States Patent Office.

J. M. NEWTON, OF NORWICH, CONNECTICUT.

*Letters Patent No. 66,873, dated July 16, 1867.*

## IMPROVEMENT IN DOOR-SPRINGS.

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

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, J. M. NEWTON, of Norwich, in the county of New London, and State of Connecticut, have invented a new and improved "Door-Spring;" 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.

The present invention relates to a new and improved spring-attachment for doors, for the purpose of causing the same to automatically or by themselves close when swung open, the construction of the said attachment being such that the door can be secured in a position either half or entirely open, as will be obvious from the following detail description, reference being had to the accompanying plate of drawings, in which—

Figure 1 is a front view of the spring-attachment for doors, showing it as applied to the same.

Figure 2, a horizontal section taken in the plane of the line *x x*, fig. 1; and

Figure 3, a detail view of that portion of the door-spring which is applied to the door.

Similar letters of reference indicate like parts.

A, in the drawings, represents the door-spring embraced in the present invention, which is in two parts or sections, B and C, the one, B, being applied to the door, and the other, C, to the frame or surrounding casing of the door, at the side of the latter, where it is hinged to the said frame or casing. The part C of the door-spring consists of a frame or bed-piece, D, made of a curved shape upon its upper side or face, and provided with two parallel uprights or standards, E, in and between which, by a trunnion-pin, *a*, upon each side, is hung a shaft, F, at one end. This shaft, through its centre, and in the direction of and for its entire length, is bored out; with a portion of the same from the end by which it is hung to the bed-piece D, to the point G, midway between its two ends, somewhat larger in the diameter of its bore than the remaining portion of the shaft, forming a shoulder, H. I, a rod, extending through the centre of the shaft, which rod is enlarged at one end so as to fit within the larger portion of the bore of said shaft, wherein it is to play forward and backward, moving by its longitudinal slot L upon the transverse or cross-pin M, in said bore. The enlarged end of the rod bears and moves upon and against the curved surface of the bed-piece D through a friction-roller, N, hung in such end; the other end of the said rod, projecting from the end of the shaft and extending over the door, passing through and into the opening O in the arm-piece P, constituting the door portion of the spring-attachment, as plainly shown in the drawings. Q, a spiral or coiled spring, placed with the enlarged portion of the bore of the shaft F around the rod I, where it is confined between the enlarged end of such rod and the shoulders H of the bore. With a door-spring of the above-described construction it is plain to be understood that as the door is opened the shaft F must be necessarily turned in the bearings of the bed-piece D, consequently causing the rod I to move or travel over the curved surface of such bed, and according to the curve of said surface, more or less compressing the spring contained within the bore of the shaft, which, by its tendency to resume its original form when the force by which the door was opened is released, must so act upon the door as to cause it to immediately close, the spring being regulated according to the force or power which is necessary to swing or close the door. When the door is swung half open the rod I, through its roller, bears against the centre or half-way point, R, of the bed-piece, and in such position is then at right angles to the same, or nearly so, where of course no action of the spring can occur to close the door until said rod has been moved past such point by pushing the door sufficiently to relieve and set the spring free, as it were, for action, the same effect and results occurring when the rod I has been swung entirely around the bed-piece D, so as to come against the point T of the same, in which position the door is entirely open.

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

The combination of the curved bed-piece B, shaft F, rod I, spiral or other suitable spring Q, and arm P, attached to the door, when all combined and arranged together substantially in the manner and for the purpose described.

J. M. NEWTON.

Witnesses:

GEO. W. MORGAN,  
S. T. HOLBROOK.