

W. Gilfillan,  
 Door Spring.  
 N<sup>o</sup> 67,290. Patented July 30, 1867.

Fig: 1.

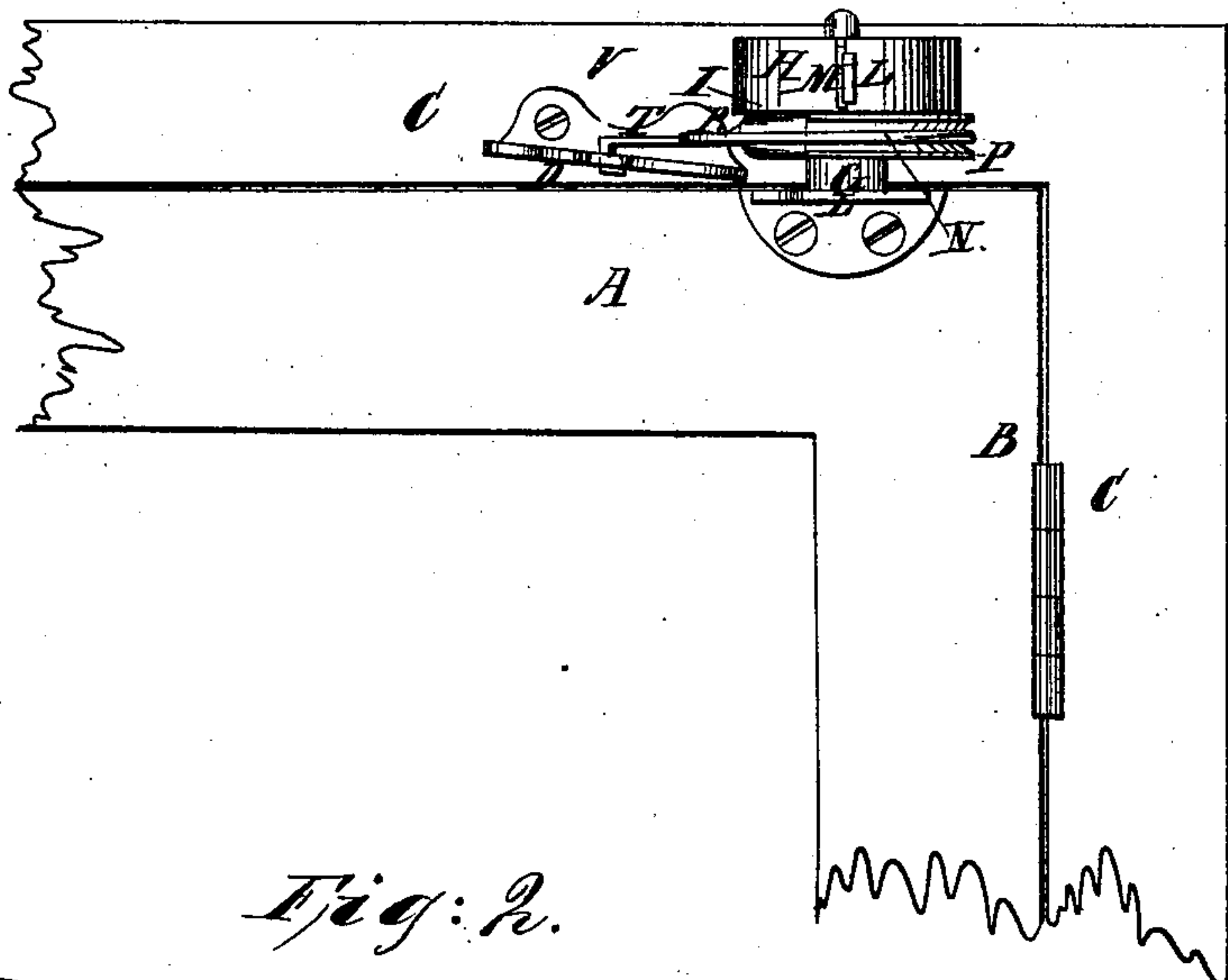
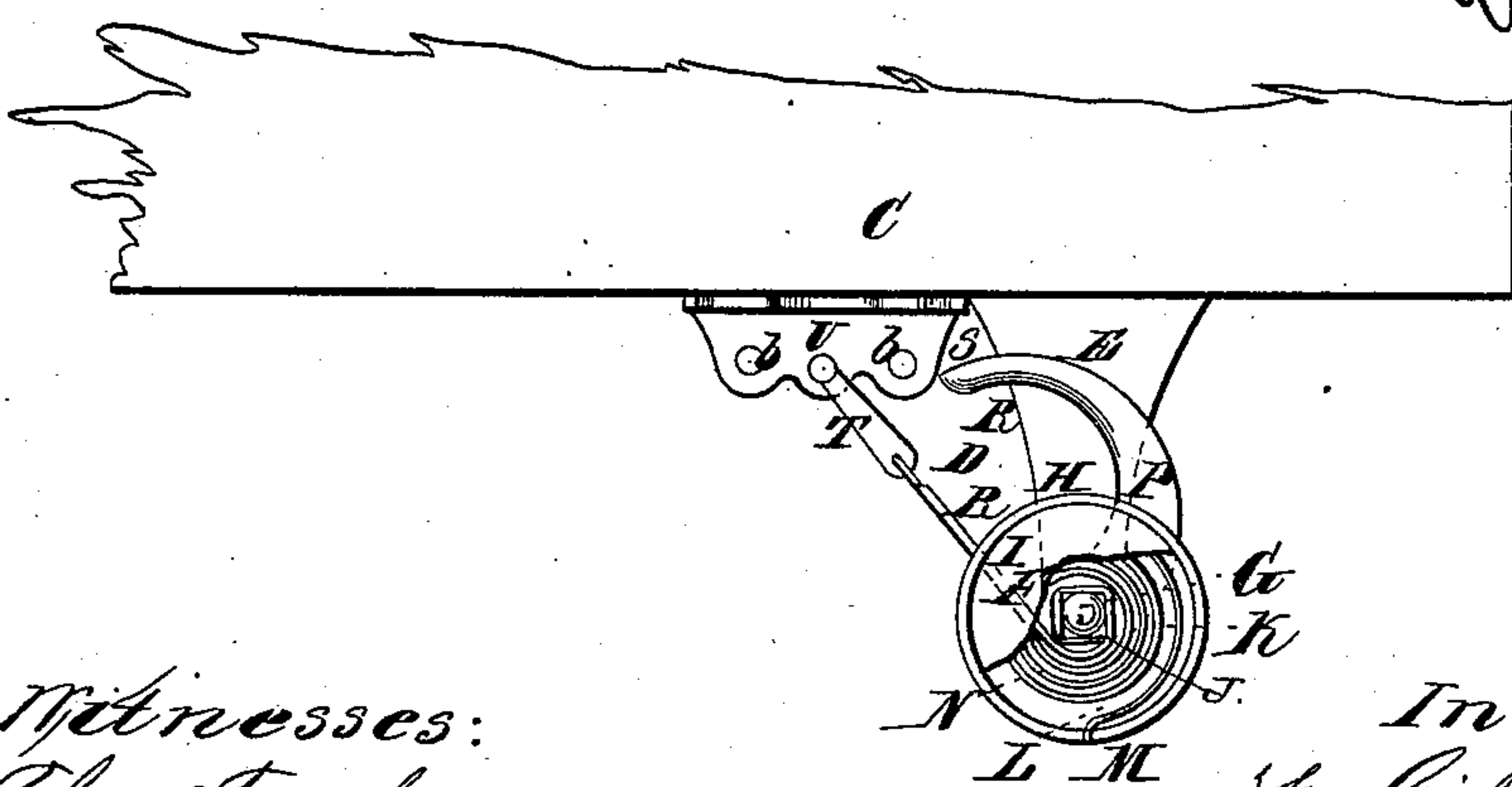


Fig: 2.



Witnesses:  
 Theo. Tuscher  
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# United States Patent Office.

WILLIAM GILFILLAN, OF SYRACUSE, NEW YORK, ASSIGNOR TO HIMSELF  
AND M. L. VAN HORN, OF NEW YORK CITY.

*Letters Patent No. 67,290, dated July 30, 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, WILLIAM GILFILLAN, of Syracuse, in the county of Onondaga, and State of New York, have invented a new and useful Improvement in Door-Springs; 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 object of the present invention is to provide a spring attachment for doors, which, when the door is opened, will operate not only to close the same, but in such a manner as to exert the greatest power or force upon the door when closed, thereby holding it tightly closed, the importance and advantages of which are obvious. In the accompanying plate of drawings my improvement in door-springs is illustrated—

Figure 1 being a front view of a portion of a door and its frame, having my attachment applied to it, and Figure 2 a plan or top view of fig. 1.

Similar letters of reference indicate like parts.

A, in the drawings, represents a door, which upon one side, B, is hinged to or hung in the door-frame C. D, my improved spring attachment, which is constructed as follows. E, an arm secured in any proper manner to the outside of the door. This arm E projects horizontally from the door, and has at or near its outer end F an upright spindle, G, made of a square shape in cross-section for a portion of its length. H, a hollow drum or cylinder closed at one end by a plate, I, having through its centre a round hole, J, of suitable size to fit over and to loosely turn upon the round portion of the spindle G. K, a spring coiled within the box or drum H, with its outer end L secured in a slot, M, of the same, and its inner end folded about and around the square-shaped spindle G. To the under side of the drum H is concentrically secured a small grooved pulley, N, from one point of which extends outward, a curved arm, P, with its outer edge grooved along or in the direction of its length, the curve of which is eccentric to that of the pulley N, but where it joins the same, is tangent, or nearly so, to its periphery, as is plainly shown in the drawings, fig. 2, more especially. R, a cord secured at one end to the outer end S of the eccentric arm P, along and in the groove of which it lies when the door is closed, in which case the eccentric arm P extends toward the door, (see fig. 2 of the drawings,) this cord at its other end having a hook, T, fastened to it for hooking it to, and in any of the series of apertures b in the flanged plate U secured to the upper rail V of the door-frame above the door. With a spring attachment of the construction and arrangement of parts above described, if its spring be first properly adjusted to the amount of force which is required to swing or move the door upon its hinges, by winding it up either more or less, as the case may be, it is plain to be understood that by the opening of the door, (as the cord R at one end is fixed to the door-frame, while its other is hung to the door through the eccentric arm P, and other parts herein above explained,) the said eccentric arm as the door opens will be swung around in an opposite direction to that in which the door is moving, thereby winding up the spring, which, reacting when the force that opened the door is removed, causes the door to immediately close or shut, where, through the action of the eccentric arm P and spring, it is held with great tightness, the spring attachment then acting with its greatest power.

I claim as new, and desire to secure by Letters Patent—

The hollow drum or casing H, with its eccentric arm P and coiled spring K, when connected with the door-frame through a cord, R, or its equivalent, and combined and connected together, substantially as and for the purpose described.

WILLIAM GILFILLAN.

Witnesses:

THOMAS M. BERRY,  
GARRET PUTMAN.