F. Dodge.

Door Spring.

No. 94,949. Patented Sept. 21, 1869.

Fig. 1.

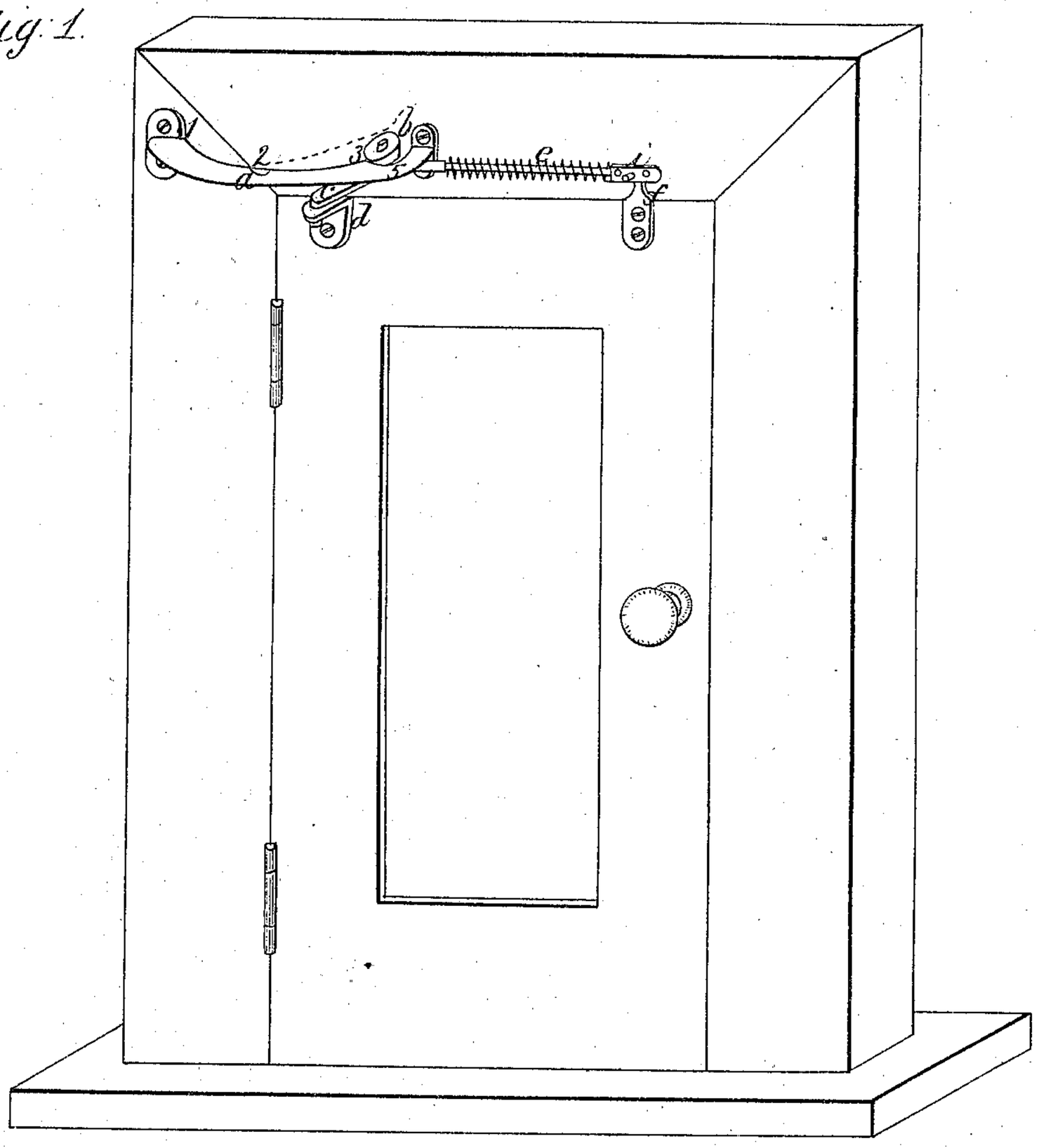
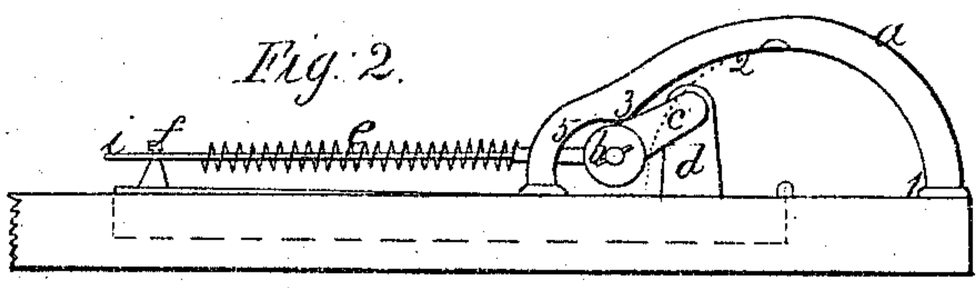


Fig. 2.



Witnesses;

F. J. Gruenwald

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United States Patent Office.

FREDERICK DODGE, OF SYRACUSE, NEW YORK.

Letters Patent No. 94,949, *dated September* 21, 1869.

IMPROVED DOOR-SPRING.

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

Be it known that I, FREDERICK DODGE, of Syracuse, in the county of Onondaga, and State of New York, have invented certain new and useful Improvements in Door-Springs; and I do hereby declare and ascertain my said invention as follows, referring to the accompanying drawing, in which—

Figure 1 is a perspective view of a door with the spring attached.

Figure 2 is a view of the details.

My spring is for the purpose of holding the door, to which it is attached, open, when it has passed a given point, and drawing it to and holding it closed when brought into another position.

To effect this I form a curved rail or bar, *a*, which I firmly affix by its two ends to the door-frame, just above the top of the door. The outline of this rail *a* is clearly represented in fig. 2, from 1 to 2.

This bar forms a curve concentric, or nearly so, with the pivot of the door-hinge, from 2 to 3. The inner edge of the bar curves or flares outward from said last-named curve, and at the end of this curve, at 5, there is a recess.

Against the inner or concave edge of the bar or rail *a*, a roller, *b*, rests, and runs along said rail, against which it is made to press, in the manner and for the purpose about to be described.

The roller *b* is on the upright stud projecting from one end of a horizontal lever, *c*, which is pivoted by its other end to a socket, *d*, that is affixed to the door below.

A spiral spring, *e*, is fastened by one end to the stud that bears roller *b*, its opposite end being hooked on to a catch, *f*, on the door.

The plate *i*, that connects the spring with the catch *f*, has several holes in it, to adjust the spring to the proper tension.

There can be a slight recess at 2, in the rail, to hold the door at that point, and the curve may flare so as to throw the door back as well as forward.

It will be seen, from the above construction and arrangement, that when the roller is upon the concentric part of the rail, there will be no tendency to throw the door to, but when it reaches the flaring part, the spring drawing upon the roller will close the door with a force equal to the tension of the spring.

It is obvious another spring can be used to actuate the roller.

I am aware that door-fastenings similar in principle to mine have been constructed before, in which, however, the friction-roller and staple were attached closely to the door.

My improvement consists in the extended socket *d*, attached to the door, by means of which a greater leverage is secured, in combination with the pivoted cranks, as a means of attaching the spring-plate, or its equivalent.

What I desire to claim, therefore, is—

In a door-spring, constructed substantially as described, attaching the spring-plate, or its equivalent, to the door, by means of the extended socket and the pivoted crank-shaft, as and for the purpose described.

FREDERICK DODGE.

Witnesses:

JNO. D. MCGOWAN,

GEO. S. LEONARD.