

J. H. FITZGERALD.
Door-Springs.

No. 146,894.

Patented Jan. 27, 1874.

FIG. 1.

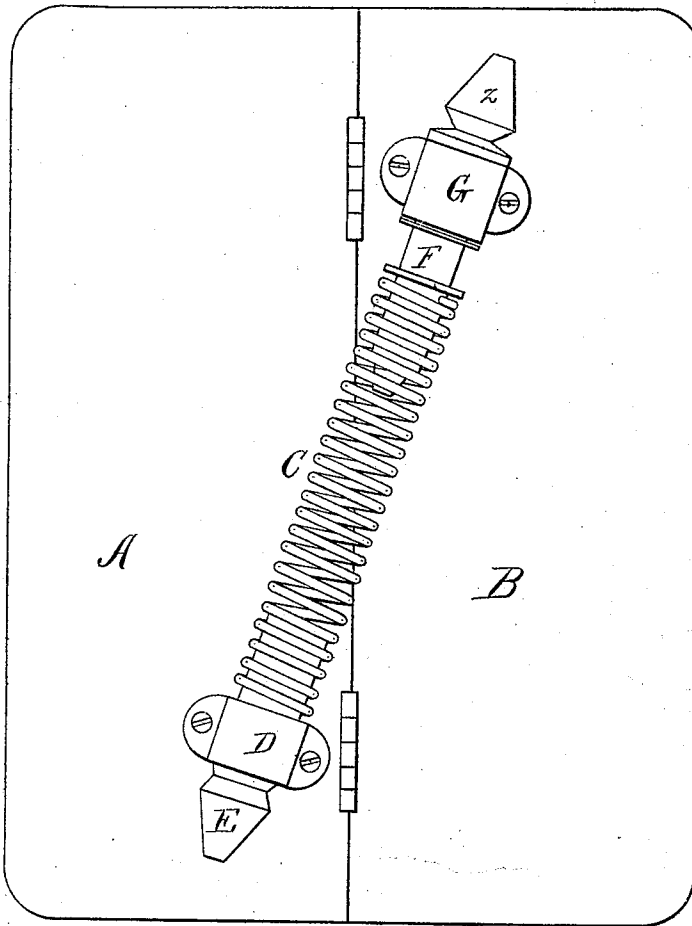
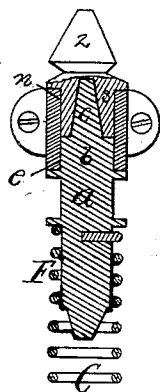


FIG. 2.



WITNESSES.

George E. Upham,
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FIG. 3.

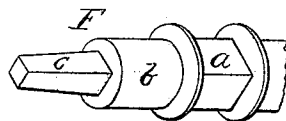
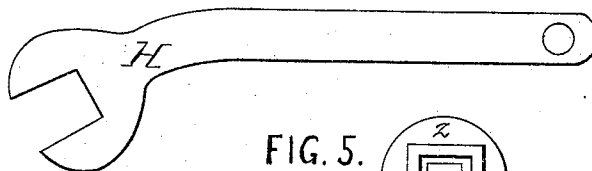
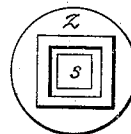


FIG. 4.

FIG. 5.



INVENTOR.

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UNITED STATES PATENT OFFICE.

JOSEPH H. FITZGERALD, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN DOOR-SPRINGS.

Specification forming part of Letters Patent No. 146,894, dated January 27, 1874; application filed January 3, 1874.

To all whom it may concern:

Be it known that I, JOSEPH H. FITZGERALD, of Chicago, in the county of Cook and State of Illinois, have invented a new and valuable Improvement in Door and Gate Springs; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same; reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of my spring in position on a door. Figs. 2, 3, 4, and 5 are details.

This invention has relation to torsion or spiral springs connecting a door or gate with the frame thereof; and it consists in the peculiar construction and novel arrangement of the fastening devices, consisting of locking-cap, coupling-bracket, journal-shaft, &c., whereby the tension of the spring is regulated, or such a change of tension provided for as will cause the spring to act either to hold the door open or shut, as may be desired.

In the accompanying drawings, the letter A designates a portion of the door to which the spring is attached, and B a portion of the door-frame. The spring C is secured at its lower portion by means of the bracket D and stationary pin E, to which the lower end of the spring is fastened. At its upper end the spring is fastened to the shaft F, having a key-seat, *a*, journal *b*, and square stud *c*. G indicates the upper bracket, in which the jour-

nal *b* turns, its lower portion being circularly bored for this purpose, as at *e*. The upper portion of the bracket is bored in square or prismatic form, as at *n*, to receive the cap *z*, the external form of which is made to fit this portion of the bore of the bracket. This cap is also hollowed out at *s* to fit the stud *c* of the shaft F, which projects up into the square portion of the bore *n*. A wrench, H, being provided to fit the seat *a*, the tension of the spring may be changed at will, the cap *z* being removed for this purpose.

When the desired tension is obtained, the cap *z* is adjusted in place in the bracket G, holding the end of the shaft F to which the spring is secured firmly, and fixing the adjustment. The door can thus be made to move slowly or quickly, as desired, and the tension of the same spring can be changed to hold the door open or closed.

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

The combination, with a torsion or spiral spring, of the journal-shaft F, having a wrench-seat, *a*, and key projection *c*, the coupling-bracket G, and the locking-cap *z*, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOSEPH H. FITZGERALD.

Witnesses:

JOHN A. WIEDERSHEIM,
J. W. HAMPTON, Jr.