W. H. MYERS.

DOOR-SPRINGS.

No. 184,166. Patented Nov. 7, 1876.

Fig. 1.

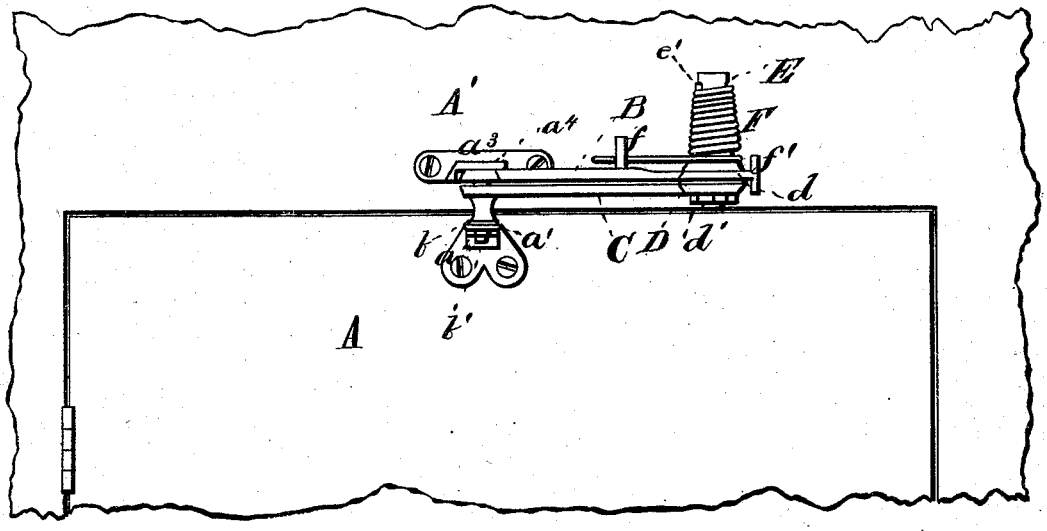

Fig. 2.

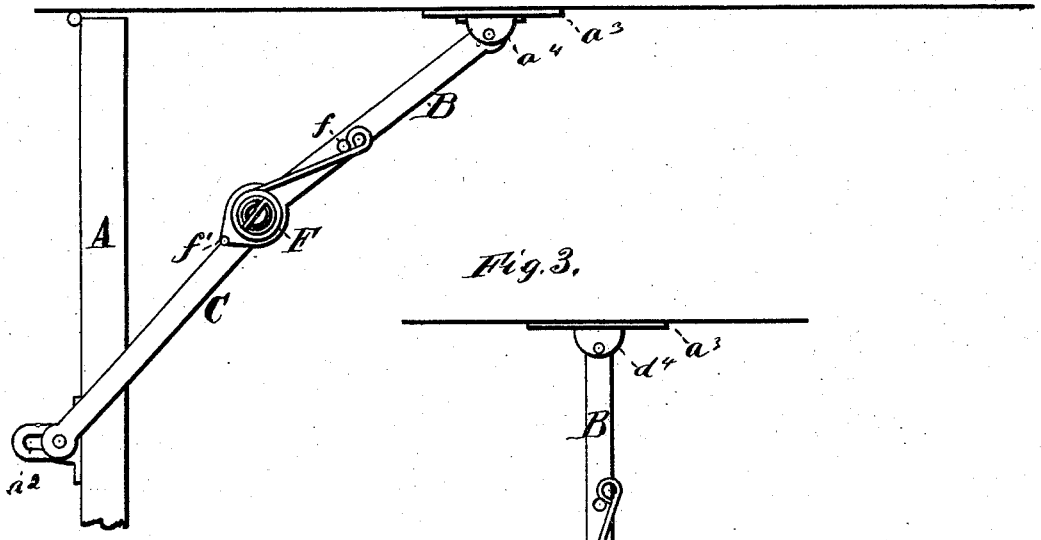

Fig. 3.

Fig. 4.

WITNESSES

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WILLIAM H. MYERS, OF OREGON, WIS., ASSIGNOR OF PART OF HIS RIGHT TO EDWIN H. OSBORN AND JAMES McMAHON FOX, OF SAME PLACE.

IMPROVEMENT IN DOOR-SPRINGS.

Specification forming part of Letters Patent No. **184,166**, dated November 7, 1876; application filed August 19, 1876.

To all whom it may concern:

Be it known that I, WILLIAM H. MYERS, of Oregon, in the county of Dane and State of Wisconsin, have invented a new and valuable Improvement in Door-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 a front view of my door-springs, and Figs. 2 and 3 are plan views of the same. Fig. 4 is a detail view thereof.

This invention relates to door-springs, and is an improvement upon the device described and claimed in Patent No. 170,887, granted to me December 7, 1875; and consists in the employment of arms pivotally connected at their outer ends, and jointed together by means of a notched bar and helical spring, as will be hereinafter more fully set forth and definitely claimed.

In the annexed drawings, A designates a door, and A′ the lintel of a door-frame. To the upper part of said door is fixed a bracket, *a*, provided with a horizontal plate, a^1, slotted at a^2, as shown in Fig. 4. A vertical bolt, *b*, is made adjustable in said slot to or from said door by a nut, *b′*. To lintel A′ is secured a bracket, a^3, which has depending from it a bolt or stud, a^4, pivoted in said bracket a^3, and made rigid with an arm, B. Arm C is pivoted to bolt *b*, and, when the door is closed, lies directly under arm B. The outer ends of arms B and C are broadened and flattened into disks *d d′*, which are separated by a washer, D.

E is a cylinder, rigidly, though detachably, secured to under disk *d′* by a screw-threaded bolt and nut, but allowing the upper disk *d* of arm B, which is suitably perforated, to turn freely upon it. Cylinder E is notched on top at *e′* to receive one end of helical spring F, which is coiled around said cylinder, its other end being secured to stud *f* on the upper side of arm B. On the extreme end of arm B is a stop-lug, *f′*, which, when the door is opened to a certain point, will strike against the under arm C, and prevent said door from being opened farther.

When the above-described devices are arranged so as to automatically close the door, as in Fig. 1, the cylinder E and helical part of spring F are extended away from the hinges, and toward the free part of door A. Spring F then operates to hold arm B vertically above arm C, and, by preventing their separation, to resist the opening of the door. When the force applied to said door is withdrawn, spring F automatically closes it; but if arms B and C are swung on their pivots, attached to door A and lintel A′, until said arms stand at right angles with said lintel, as shown in Fig. 3, the door will be effectually locked closed, as, the strain being in the direction of the length of arms B and C, there is no tendency to separate said arms. Again, if the said arms are swung on their pivots still farther, until cylinder E is presented toward the hinged side of the door A, there will be no difficulty in opening said door; but, on the contrary, the spring F will assist in opening it, and will hold it open, as shown in Fig. 2.

The adjusting device a^1 a^2 *b b′* regulates the amount of force exerted by spring F, and also the distance to which the door may be opened before stop-lug *f′* will come in contact with arm C.

Various modifications may be made without departing from the spirit of my invention; for instance, the cylinder E may be connected to the upper arm instead of the lower one, and the stud *f′* may be on the lower arm instead of the upper one.

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

The combination, substantially as herein described, of the arms B and C, pivotally connected at their outer ends, and jointed together by means of the notched bar or cylinder E, and a helical spring, F, coiled around said bar E, holding said arms together, all operating in the manner as described.

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

WILLIAM H. MYERS.

Witnesses:

FRANC L. POWERS,

H. B. POWERS.