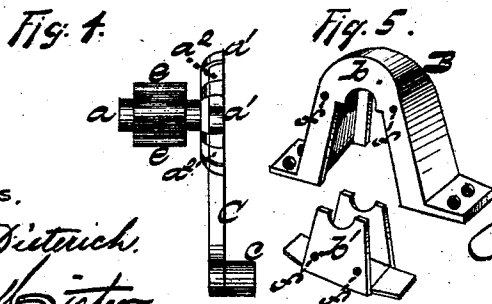
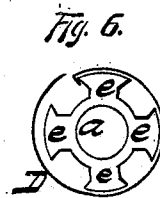
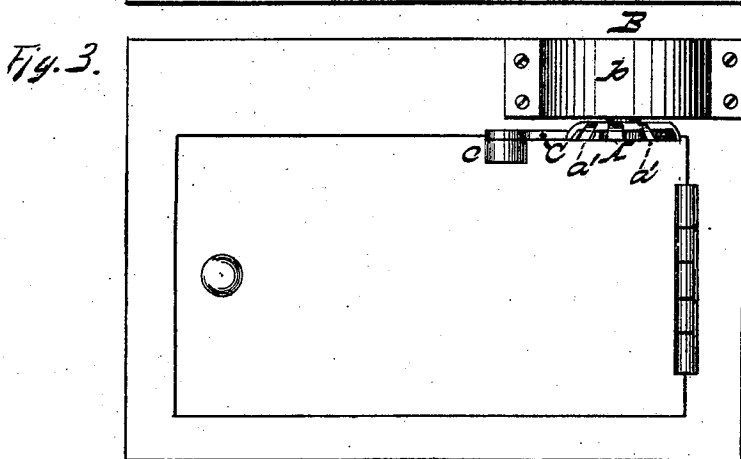
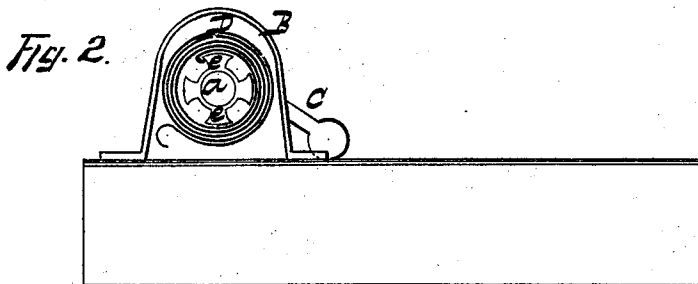
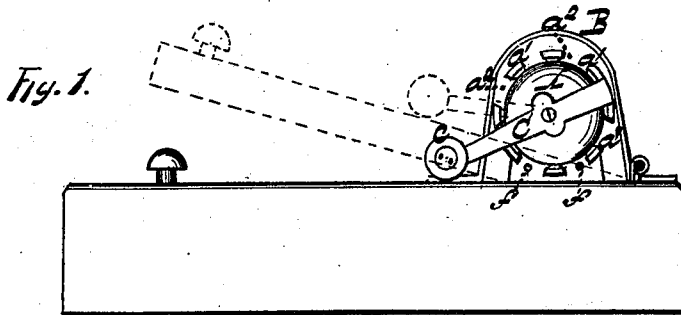


A. A. STIMSON.

DOOR-SPRING.

No. 173,080.

Patented Feb. 1, 1876.



WITNESSES.
Chas. G. Dietrich.
J. H. Winter

INVENTOR.
Abel A. Stimson
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Atty.

UNITED STATES PATENT OFFICE.

ASHBEL A. STIMSON, OF MONTPELIER, VERMONT, ASSIGNOR OF ONE-HALF HIS RIGHT TO CHARLES T. SABIN, OF SAME PLACE.

IMPROVEMENT IN DOOR-SPRINGS.

Specification forming part of Letters Patent No. **173,080**, dated February 1, 1876; application filed November 23, 1875.

To all whom it may concern:

Be it known that I, ASHBEL A. STIMSON, of Montpelier, in the county of Washington and State of Vermont, have invented certain new and useful Improvements 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 which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 is a plan view of my improved door-spring. Fig. 2 is a similar view thereof, with the top plate of spring-inclosing case removed. Fig. 3 is a side view of the same; and Figs. 4, 5, and 6 detached views of my improvement.

Corresponding parts in the several figures are denoted by like letters.

This invention relates to a certain improvement in door-springs, of that class in which the door is closed by the recoil of the spring wound up or compressed by the opening of the same; and it consists of a disk having tapering projections or teeth, to which is adjusted a wedge-shaped lever actuated by an inclosed spring. This case is formed in two parts, specially adapted for convenience in receiving and removing the spring, &c., substantially as hereinafter more fully set forth.

In the annexed drawing, A refers to a cogged or toothed disk or wheel, the axis *a* of which has its bearings in a case, B, attached to the door-frame or other convenient point. The projections or teeth *a'* *a'* of the disk or wheel A are wedge shape or tapering to provide dovetail-openings *a''* *a''* between them to receive and permit of the lever C, in cross-section of a corresponding shape, to be detachably connected thereto, to admit of the lever being withdrawn and adjusted to any desired point thereon in varying or increasing and diminishing the tension of the spring.

Depending from the free or isolated end of the lever C is a friction-roller, *c*, pressing against the door, and which rotates as the door is opened, and the lever carried back, as indicated, for instance, in dotted lines by Fig. 1. A spring, D, attached at one end to one of a series of radial projections, *eee*, upon the axis *a* of the disk or wheel A, is coiled around said projections, as shown in Fig. 2, the recoil of which closes the door, it being wound up or compressed when the latter is opened. In order to facilitate the detachment of the lever C from the disk or wheel, and retain the latter in place when under tension, and while the lever is being readjusted, holes or perforations *ff* are made in the case B, into which is inserted a pin between the projections or teeth of the wheel or disk. The case B is made in two parts, *b* *b'*, one fitting within the other, and each so recessed as, jointly, to form an eye or eyes to receive the axis *a* of the disk or wheel A, the object of this construction being, chiefly, for convenience in inserting the spring and removing it when it is to be renewed.

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

1. The disk A, tapering projections or teeth *a'* *a'*, lever C, in cross-section, of a wedge-shape, spring D, and case B, substantially as and for the purpose set forth.

2. The case B, made in two parts, *b* *b'*, fitting one within the other, and each being so recessed as, jointly, to form eyes for the reception of the axis *a* of the disk or wheel A, and containing the actuating-spring D of the lever C, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own, I affix my signature in presence of two witnesses.

ASHBEL A. STIMSON. [L. S.]

Witnesses:

CHARLES W. PORTER,
JAMES S. PECK.