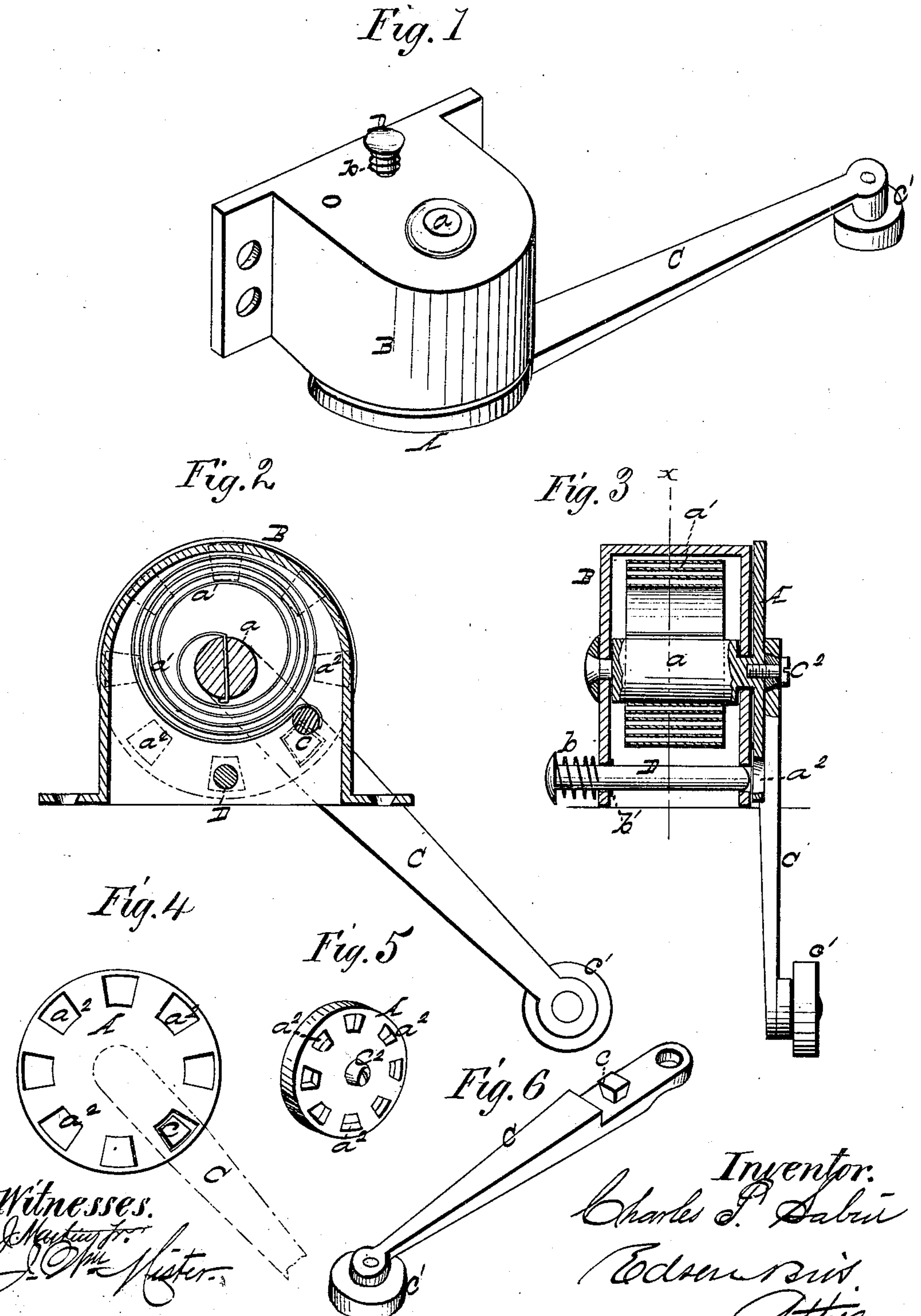
C. T. SABIN.

DOOR-SPRING.

No. 180,644. Patented Aug. 1, 1876.



Witnesses.
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UNITED STATES PATENT OFFICE.

CHARLES T. SABIN, OF MONTPELIER, VERMONT.

IMPROVEMENT IN DOOR-SPRINGS.

Specification forming part of Letters Patent No. **180,644**, dated August 1, 1876; application filed March 25, 1876.

To all whom it may concern:

Be it known that I, CHARLES T. SABIN, 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 letters of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved door-spring. Figs. 2 and 3 are sectional views, and Figs. 4, 5, and 6 are detail views thereof.

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

This invention relates to a certain improvement in door-springs, by the recoil of which the door is closed, the same having been previously compressed by the opening of the door; and it consists of a spring-detent or pins and perforated disk for holding the door-lever disk, whose axis is provided with a spring under tension while the said lever is being adjusted thereto, substantially as hereinafter more fully set forth and definitely claimed.

In the annexed drawing, A refers to a disk or plate having an axis, *a*, to which is attached a coiled or other spring, a^1, inclosed by a case, B, within which the axis *a* is also journaled. The disk or plate A is provided with a series of angular holes or apertures, a^2 a^2, for the reception of a correspondingly-shaped projection or pin, *c*, upon the door-lever C, having a frictional roller, c^1, at its free end, to bear against the door, and its opposite end screwed or otherwise attached to the disk A, as at c^2.

D is a detent or pin passing through the case B, and having a limited movement by the action of the retracting-spring *b*, exterior to the case, a stop, *b'*, being attached to the detent or pin D inside of the case, to limit its retraction.

The tension of the spring a^1 upon the axis *a* of the lever-holding disk A having become weakened from strain, &c., constantly exerted upon the spring, it becomes necessary to take up the slack, to do which detach the lever C and rotate the disk or plate A until the slack has been taken up or the required tension attained.

The detent or pin D is now projected or forced into the hole or aperture a^2 of the disk or plate A opposite its free or inner end, and the said disk thus held under tension until after the readjustment thereto of the lever C, when, by simply releasing the inner end of the detent or pin D therefrom, the spring *b* will retract the detent, and allow the lever C to swing clear and bear against the door.

The action of the spring upon the lever or door may be suspended at any point by removing the lever from the door the required distance, and projecting the detent into the coincident aperture of the disk or plate A.

It will also be observed that the walls of the angular holes or apertures a^2 a^2 and the projection or pin *c* of the lever are made flaring inwardly or tapering outwardly, so that when any strain is put upon the lever the tendency is to bring the lever and disk or plate into closer contact and bind them firmly together, and also to keep the projection from slipping out of its hole when the holding-screw is loosened for adjusting.

The holes or apertures a^2 a^2, instead of being angular, may be made round or other suitable shape.

If desired, the lever C may be extended entirely across the face of the disk, and two projections or pins, *c*, provided thereto, to enter any two of the holes or apertures a^2 a^2 in a line in the disk.

By substituting the holes or apertures a^2 a^2, in lieu of the teeth heretofore in use, cheapness of manufacture is enhanced, and the

disk, &c., plated, when such is desired, more readily and cheaply, &c.

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

The detent or pin D, provided with the retracting-spring *b*, in combination with the case B, disk A, having perforations, and lever C, substantially as and for the purpose set forth.

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

CHARLES THURSTON SABIN.

Witnesses:
LUTHER L. DURANT,
HARRY G. DEWING.