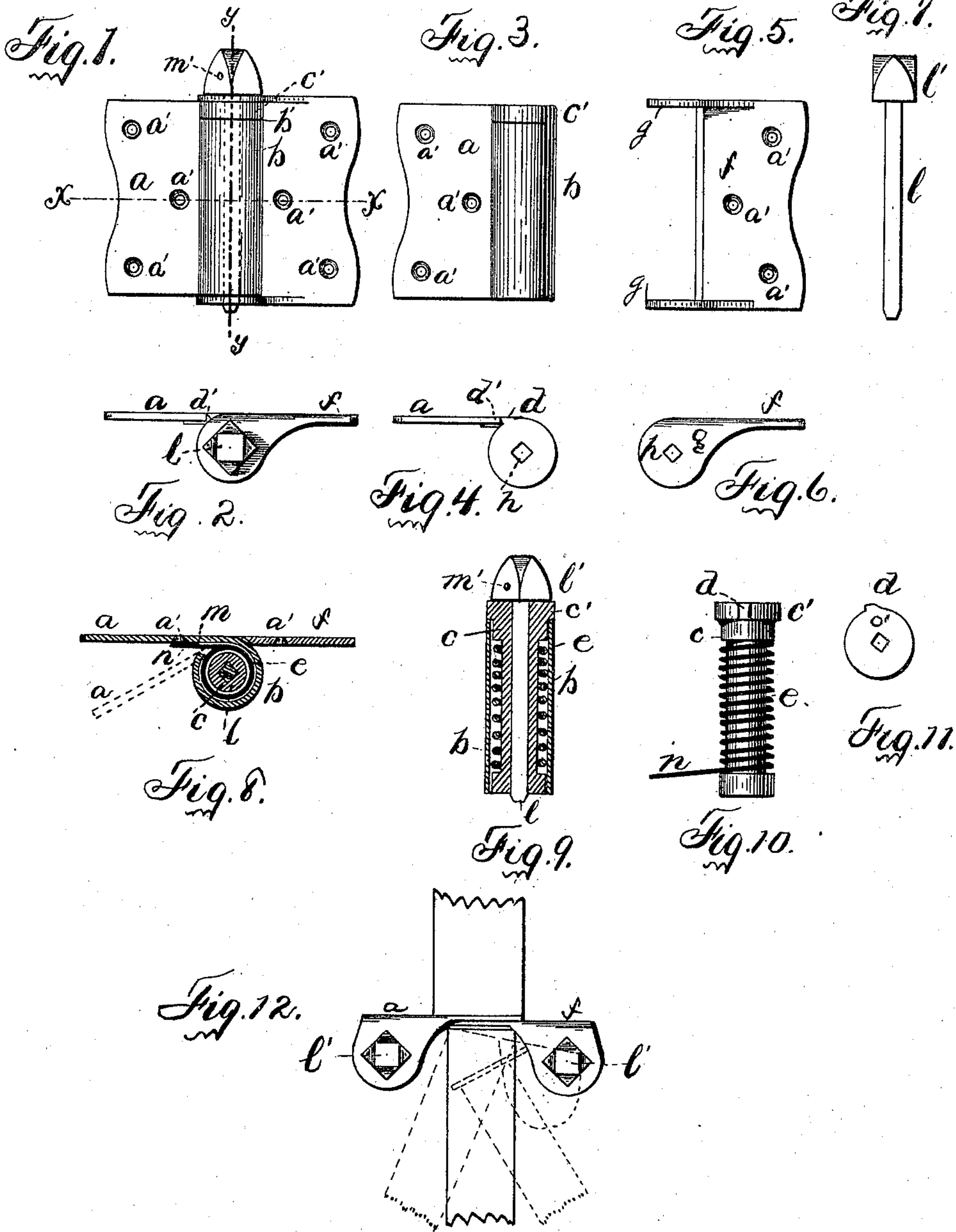


(No Model.)

A. D. ANTHONY.
SPRING HINGE.

No. 604,165.

Patented May 17, 1898.



WITNESSES:
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ALONZO D. ANTHONY, OF GROTON, NEW YORK.

SPRING-HINGE.

SPECIFICATION forming part of Letters Patent No. 604,165, dated May 17, 1898.

Application filed August 30, 1897. Serial No. 649,945. (No model.)

To all whom it may concern:

Be it known that I, ALONZO D. ANTHONY, of Groton, in the county of Tompkins, in the State of New York, have invented new and useful Improvements in Spring-Hinges, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to spring-hinges, having particular reference to that class in which I am enabled to regulate and adjust at will the tension of the spring.

My object is to produce such a spring-hinge and also one in which the parts may be readily separated, detached, and replaced; and my further object is to produce a double spring-hinge, both of which are cheap and durable in their construction and of great utility.

To that end my invention consists in the several new and novel features of construction and operation which are hereinafter described and which are specifically set forth in the claims hereunto annexed.

It is constructed as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a front view of the single spring-hinge complete. Fig. 2 is a top plan view thereof. Fig. 3 is a view of one of the leaves and spring-case, showing the top of the spindle. Fig. 4 is a top plan view thereof. Fig. 5 is a view of the opposite hinge-leaf. Fig. 6 is a top plan view thereof. Fig. 7 is a view of the pin detached. Fig. 8 is a section on line *xx*, Fig. 1. Fig. 9 is a vertical section on line *yy*, Fig. 1. Fig. 10 is a side view of the spindle and spring mounted thereon. Fig. 11 is a top plan view thereof. Fig. 12 is a top plan view of the double spring-hinge.

a is a leaf, constructed, preferably, of sheet metal, provided with perforations *a'* for securing it to the jamb, and having one edge turned over upon itself, as shown in the drawings, forming a case *b* for holding the spindle *c*. The spindle at its upper end is provided with a head *c'*, upon which head is a ratchet *d*.

The upper end of the case *b* is cut away at *b'*, so as to allow the head *c'* upon the spindle to drop down upon the top of the case *b* for two purposes—first, so that it will be flush with the edge of the leaf *a*, and, second, to afford a bearing *d'* with which the ratchet *d* engages,

so as to maintain, as will be hereinafter described, the tension upon the spring *e*, which is mounted upon the spindle *c*, as shown in Fig. 10.

f is the opposite leaf, constructed, preferably, from sheet metal, having apertures through which it may be secured to the door and having arms *g*, provided with rectangular openings *h*, the said arms *g* adapted to inclose the ends of the case *b* and the head *c'* upon the spindle, as shown in Fig. 1.

l is an angular pin having a head *l'*, which head is perforated, preferably as shown at *m'*, the said pin being adapted to fit into the perforations *h* in the arms or ears *g*.

In turning over the edge of the leaf *a*, so as to form the case *b*, I leave a small slotway *m'*. The spring *e* is mounted upon the spindle *c*, one end being secured in any ordinary manner, and the opposite end *n* allowed to remain free until it passes into the slotway *m'*, where it is confined.

To assemble the parts above described, I first take the spindle *c*, place the spring *e* upon it and slide it into the case *b*, allowing the spring *n* to extend into the slotway, as shown in Fig. 8. Just before the head *c'* drops into the recess formed at *b'* I turn the spindle about until I have produced the desired tension upon the spring, and then force it down into its position and until the lug or ratchet *d* engages with the bearing *d'*. I then place the leaf *f* in position, as shown in Fig. 1, and insert the pin *l*.

In case at any time I desire to tighten or release the tension upon the spring I withdraw the spring sufficiently to allow the ratchet *d* to come out of engagement with the bearing *d'*, and then turn the head of the pin, by means of the opening *m*, to produce the desired effect.

It will be observed that the opening *o'* in the spindle is angular, so that in the movement of the pin it will carry the spindle with it. In Fig. 12 I show a double spring-hinge, which consists simply of two of my spring-hinges mounted upon a common base; otherwise they are exactly similar to the hinge.

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

1. A spring-hinge, comprising a leaf hav-

ing a case upon one edge, the upper portion of which is removed, a spindle having a head, and a ratchet formed thereon, a spring mounted on said spindle, and a second leaf having
5 ears adapted to engage the ends of the case, and top of the spindle, and a pin, as set forth.

2. In a spring-hinge, the combination of a leaf having a case upon one edge, the upper portion of which is removed to form a bearing, a spindle having a head and ratchet
10 thereon, a spring mounted on said spindle, one end of which is confined, a second leaf hav-

ing perforated ears adapted to engage the ends of the case, and the top of the spindle, said ears and spindle having angular openings, and an angular pin adapted to engage
15 said openings as set forth.

In witness whereof I have hereunto set my hand this 23d day of August, 1897.

ALONZO D. ANTHONY.

In presence of—

MARY A. FRANKLIN,
HOWARD P. DENISON.