J. BLISS.

Improvement in Gate and Door-Springs.

No. 132,133. Patented Oct. 15, 1872.

Fig. 1.

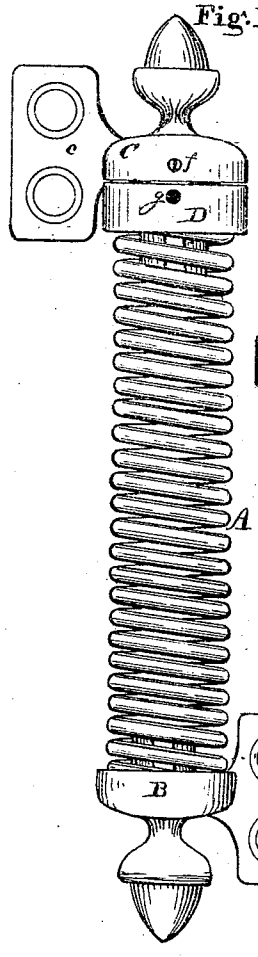


Fig. 2.

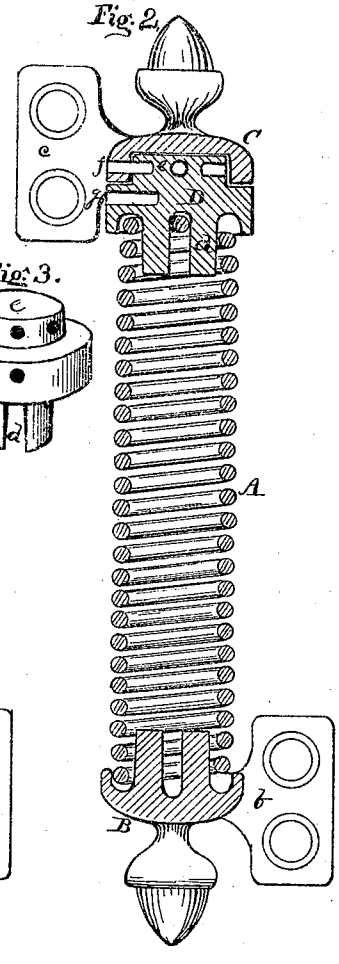


Fig. 3.

WITNESSES.

Geo. W. Tibbitts

M. C. Dodson.

INVENTOR.

Joseph Bliss

AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

JOSEPH BLISS, OF CLEVELAND, OHIO.

IMPROVEMENT IN GATE AND DOOR SPRINGS.

Specification forming part of Letters Patent No. **132,133**, dated October 15, 1872.

To all whom it may concern:

Be it known that I, JOSEPH BLISS, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented an Improved Gate and Door Spring, of which the following is a specification:

This invention is an improvement in that class of springs for gates and doors in which the upper end of the spring is adapted for attachment to the gate or door and the lower end is secured to the post or jamb. To the ends of a spiral spring are fitted caps provided with ears through which the fastening-screws pass, a tension-regulator, adjustable by means of a pin entering any one of a series of holes, being interposed between one end of the spring and one of the caps; and in this construction my invention consists.

In the accompanying drawing, Figure 1 is a front-side elevation; Fig. 2 is a vertical section of my improved spring; and Fig. 3 is a detached view of the tension-regulator.

A is a coiled spring, having the ends of the wire bent inward across the diameter of the coil. B is a cap covering the end of the spring and having a projection which enters the coil a short distance, and is split so that the bent end of spring is embraced by said projection. The cap B also has an ear, *b*, by which it is secured to the post. The upper cap C resembles the cap B, but does not have the projection—only a cavity. D is a tension-regulator having a projection, *d*, like the cap B, for embracing the upper end of the spring. The top of the regulator D also has a projection, *e*, which fits in the cavity of the cap C and is secured therein by a pin or screw, *f*. The ear *c* of the cap C is secured to the gate or door. The projection *e* of the tension-regulator D has a number of holes in it, so that the tension of the spring may be adjusted by turning the regulator to the point desired and placing the pin *f* through the cap into it. A hole, *g*, is made in the regulator, in which a rod may be inserted for turning the same. By this arrangement the spring may be readily adjusted, for either opening or closing the gate or door.

I do not claim the method of attaching the ends of the spring to the cap and tension-regulator, nor do I claim, broadly, a tension-regulator with a door-spring; but

I claim—

The tension-regulator D *d e*, adjustable within the cap C by means of a pin, *f*, adapted to enter any one of a series of holes in the regulator, combined with the spring A and caps B C, cast with the ears *b c*, to form an improved gate and door spring, arranged, constructed, and operating as herein set forth.

JOSEPH BLISS.

Witnesses:

GEO. MENGER,

D. L. WOOD.