

A. A. STIMSON.  
Door and Gate Springs.

No. 153,503.

Patented July 28, 1874.

Fig. 1.

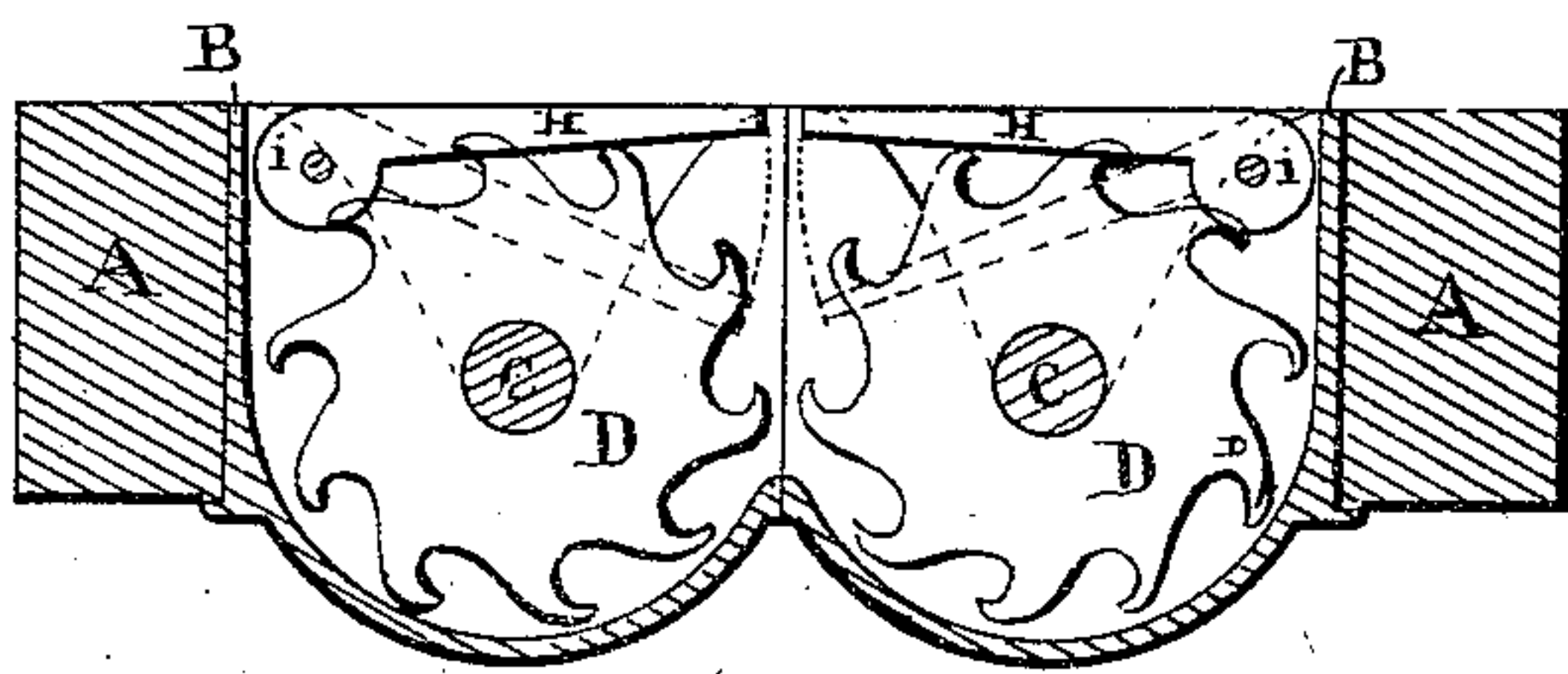
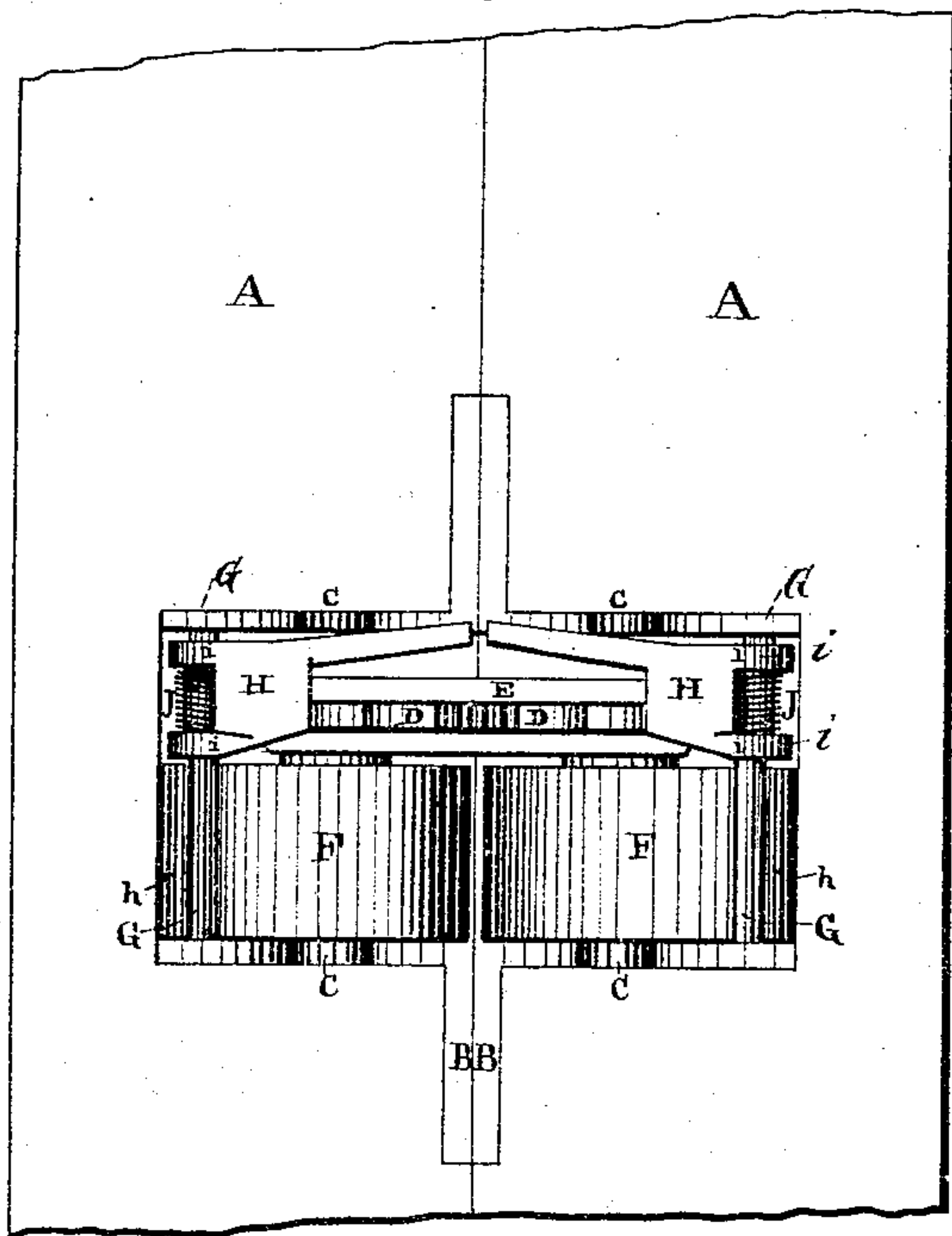
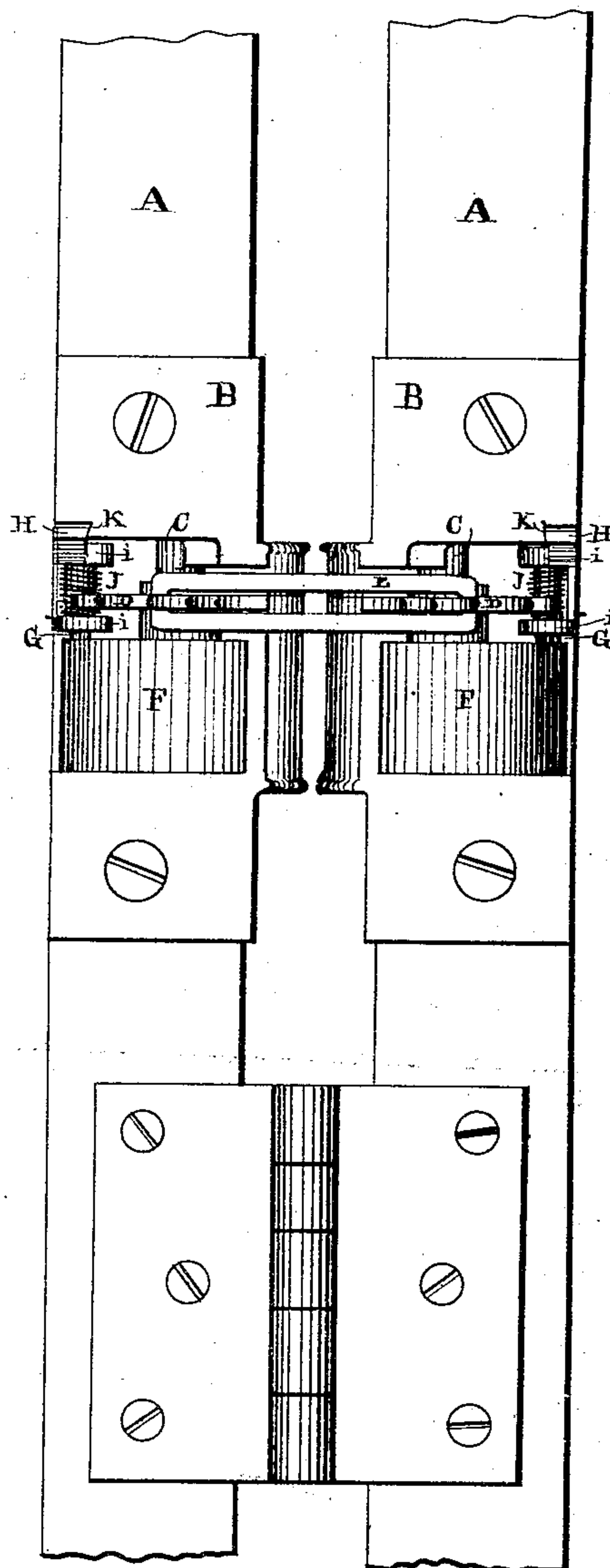


Fig. 2.

Witnesses

A. R. Bixby  
Collins Blakely

Fig. 3.



Inventor

Asahel A. Stimson

# UNITED STATES PATENT OFFICE.

ASHBEL A. STIMSON, OF MONTPELIER, VERMONT.

## IMPROVEMENT IN DOOR AND GATE SPRINGS.

Specification forming part of Letters Patent No. **153,503**, dated July 28, 1874; application filed December 30, 1872.

*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 Improvements in Door and Gate Springs, of which the following is a specification:

My invention relates to an improvement upon Enos Stimson's patent of July 13, 1869, whereby the keying-up is done in a novel manner, and the springs being connected together by a link hooked into the notches of the ratchet-wheels, whereby the springs are worked from the inside end, thereby lessening the friction in the springs caused by the coils rubbing together, in consequence of being worked from the end, as in Enos Stimson's patent. The following is a full, clear, and exact description thereof:

In the accompanying drawings, Figure 1 is a back-side view of the entire device as seen with wood broken away. Fig. 2 is an end view of the rotary wheel and ratchet. Fig. 3 is a perspective view of the whole as applied to a door when open.

It consists of two main castings, B B, with flanges by which to attach themselves to the door and casing A A, having recesses to receive two rotary shafts, C C, on the ends of which are ratchet-wheels D D, with hooked teeth so shaped as to receive and hold a link, E, connecting them, and also serve the purpose of a ratchet-wheel. On the shafts C C are flat scroll-springs F F, attached to said shafts, upon which they are wound, the outer ends of which are made stationary, being attached by a single hook, h, to rods G G, passing across the back side of the main castings B B. On the ends of these rods are spring-pawls H H, each having two bearings, i i, through which said rods pass. Between these bearings i i, and winding round the rods, are

small spiral springs J J, one end of which connects with spring-pawls H H, the other with castings B B. These pawls H H serve as bars, passing forward to front side of main castings, B B, and catching into hooked notches K K in said castings.

The operation of the above device is as follows, viz: To remove the link, open the door and remove the spring pawls or bars H H from the notches K K; the spiral springs J J bear them in. When closing the door the spring-pawls H H catch the teeth of ratchet-wheels D D and liberate the link E, when it may be removed. To increase the tension of springs F F, close the door sufficient to hook the link E one notch back on the ratchet-wheels D D. Then open the door and place the spring-pawls H H in the notch K K. To lessen the tension of springs F F, open the door sufficiently to remove these pawls from the notches. Then open the door farther and hook the link E forward one notch on ratchet-wheels D D, removing the spring-pawls H H to their places in the notches K K.

I do not claim a slotted ratchet-wheel; neither do I claim a scroll-spring with these hooks in the outer end; but

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

1. The combination of link E with ratchet-wheels D D, substantially as and for the purpose set forth.

2. The spring-pawls H H, spiral springs J J, and notches K K in main casting, substantially as and for the purpose hereinbefore set forth.

ASHBEL A. STIMSON.

Witnesses:

H. R. BIXBY,  
COLLINS BLAKELY.