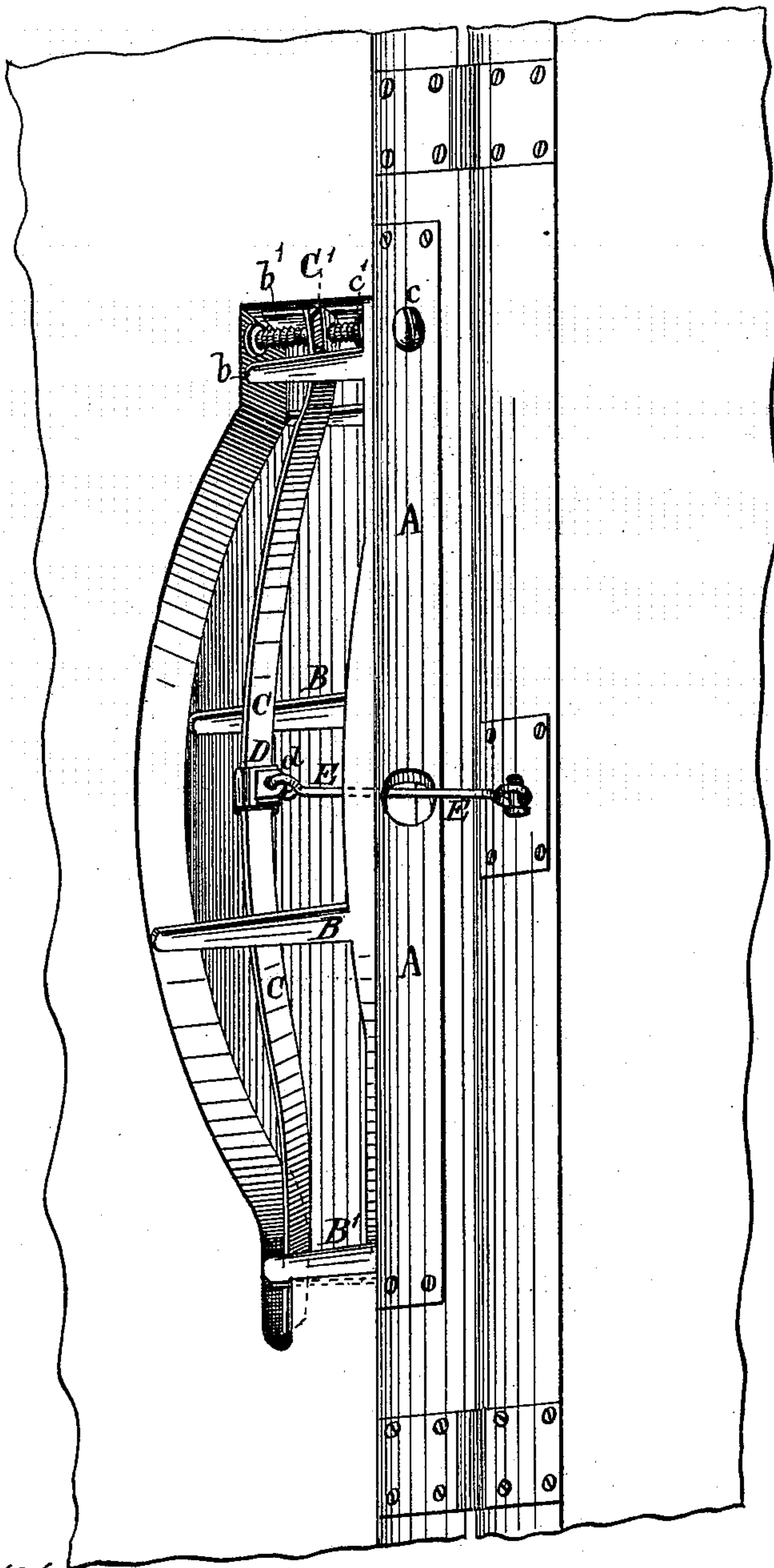


DOOR-SPRINGS.

No. 193,681.

Patented July 31, 1877.



Witnesses  
Henry Orth  
W. D. Smith.

Inventor  
for Arthur P. Yates.  
Jm W Doubleday  
att'y.

# UNITED STATES PATENT OFFICE.

ARTHUR P. YATES, OF SYRACUSE, NEW YORK.

## IMPROVEMENT IN DOOR-SPRINGS.

Specification forming part of Letters Patent No. 193,681, dated July 31, 1877; application filed December 19, 1876.

*To all whom it may concern:*

Be it known that I, ARTHUR P. YATES, of Syracuse, in the county of Onondaga and State of New York, 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 drawing, and to letters of reference marked thereon, which form a part of this specification.

The drawing represents an elevation, in perspective, of my invention as applied to a door, portions of the parts being broken away to show the spring and its connection with the jamb and door.

My invention has for its object the construction of a cheap, durable, effective, and adjustable door-spring, concealed within the door or door-casing, and arranged in a vertical position, and shall be deflected toward the edge of the door when the door is opened; and to this end it consists, mainly, in combining with a door-spring arranged as described, novel devices whereby its tension may be regulated at will without removing the spring or its supporting plate or frame from the door or casing, as will be hereinafter more fully explained and definitely claimed.

A is a face-plate secured to the jamb by screws. B B are guiding-posts attached to opposite sides of the plate. C is the spring, one end of which rests upon a supporting-post, B', the opposite end resting upon a nut, C', which engages with a screw, c. c' is a collar secured to and moving with screw c upon the inside of plate A. The nut C' fits closely between posts b b', and is thereby kept from turning. D is a clasp or clip, connected with

the central portion of the spring, and provided with an eye, d. E is a link connecting the clip D with a hook or eye upon the inner edge of the door, through an opening in the face-plate A.

From an inspection of the drawings it will be seen that as the door is opened the spring will be drawn into the position indicated by the dotted lines, and it will also be readily understood that by turning the screw c, (which has a slot in its outer end for that purpose,) the nut C' can be moved, and the tension of the spring regulated, at will.

The end of the screw c passes through the end of the spring, and is riveted down, for the purpose of confining the spring thereon, and as the nut, though free to move upon the bolt or screw, is prevented from vertical movement by the posts b b', it is evident that the screw, nut, and posts serve to retain the spring in proper working position.

What I claim is—

1. The combination, with the plate A, of the vertical spring C, the screw c, mounted in the plate A, and the nut C', substantially as set forth.

2. The plate A, provided with the guiding-posts B B, in combination with the vertical spring C, substantially as set forth.

3. The combination of the posts b b' with the spring C, screw c, and nut C', to prevent undue vertical movement of the spring, substantially as set forth.

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

ARTHUR P. YATES.

Witnesses:

CHARLES G. ROBINSON,  
M. M. MACDONALD.