No. 840,872. PATENTED JAN. 8, 1907.

J. H. SHAW.

COMBINED DOOR CHECK AND SPRING.

APPLICATION FILED JULY 26, 1905.

Fig. 1.

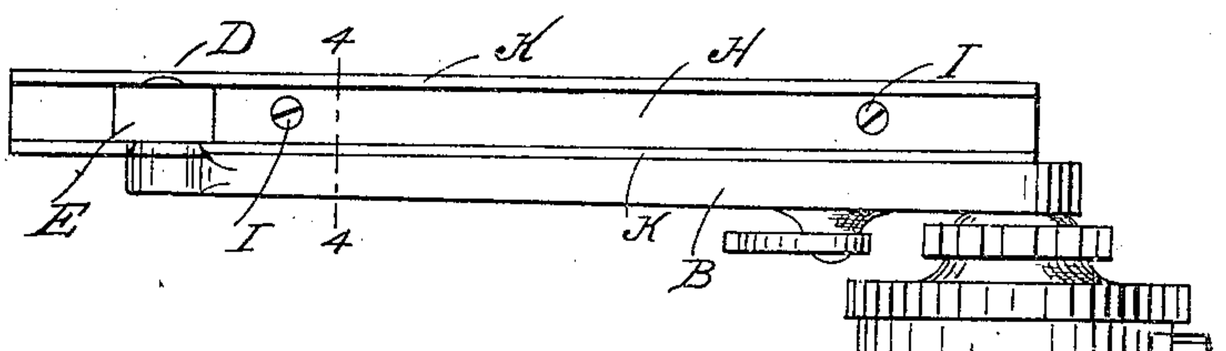


Fig. 4.

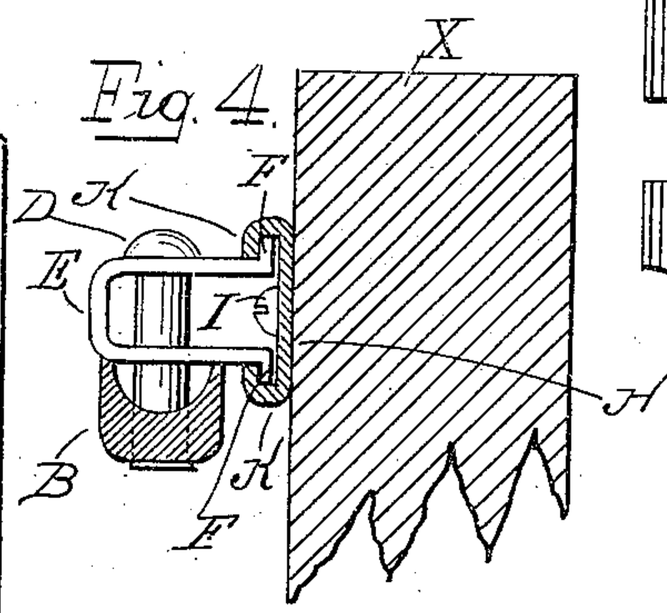


Fig. 3.

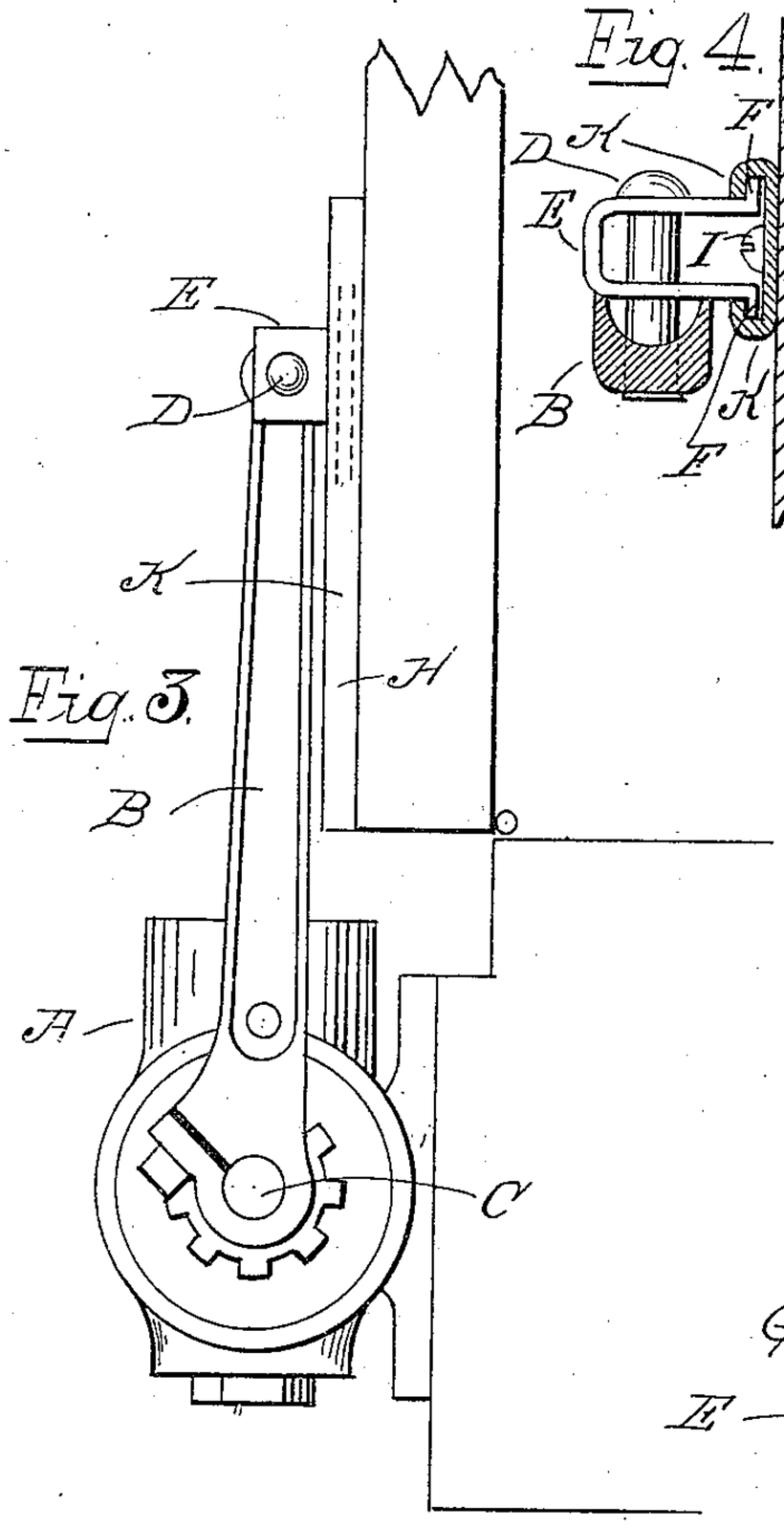


Fig. 2.

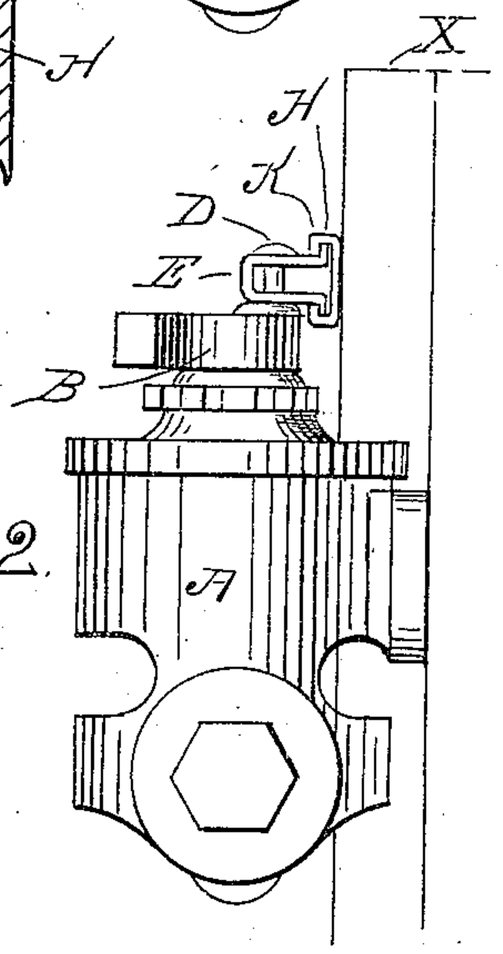
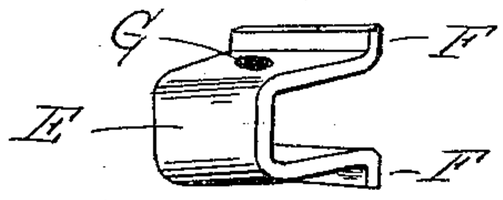


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN H. SHAW, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO SARGENT & COMPANY, OF NEW HAVEN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

COMBINED DOOR CHECK AND SPRING.

No. 840,872. Specification of Letters Patent. Patented Jan. 8, 1907.

Application filed July 26, 1905. Serial No. 271,322.

To all whom it may concern:

Be it known that I, JOHN H. SHAW, of the city and county of New Haven, State of Connecticut, have invented new and useful Improvements in a Combined Door Check and Spring, of which the following is a full, clear, and exact description when taken in connection with the accompanying drawings, which form a part thereof, and in which—

Figure 1 represents a front elevation of a combined door check and spring embodying the invention with the door shown in its closed position; Fig. 2, a similar view with the door shown open; Fig. 3, a top view of the parts as shown in Fig. 2; Fig. 4, a transverse vertical section on line 4 4 of Fig. 1, and Fig. 5 a perspective view of the traveling shoe.

In all figures similar letters of reference represent like parts.

This invention relates to combined door checks and springs, and more particularly to the connection between the spindle of the check and the door.

The object of this invention is the production of a novel, efficient, and simple form of connection between the door and check in which a single rigid arm or bracket is used, with a pivoted shoe, adapted to travel on a track or other similar device on the door, whereby a direct and constant engagement is obtained between the arm and the door.

To this and other ends the invention consists of the several improvements and combinations of parts set forth and claimed hereinafter.

For a better understanding of the invention reference is had to the accompanying drawings, in which the parts designated by the letter A represent the case which incloses a spring adapted to close the door and a liquid or other form of check to regulate the operation of the spring. These parts are not shown, as the check and spring may be of any well-known form or construction.

B designates a single rigid arm adapted at one end to be rigidly secured to the spindle C of the door-check to rotate therewith. To the other end of the arm or bracket B is pivoted, by means of a pin D or other means, a shoe E. This shoe E is formed, as shown more particularly in Figs. 4 and 5, of sheet metal formed U-shaped and having its extreme edges F turned outward to form lateral engaging flanges. The pin D projects through the perforations G in the top and bottom of the U-shaped shoe E.

Secured to the side of the door X by screws I or other means is a metal strip H, the lateral edges of which are turned up, as shown more particularly in Fig. 4, to form the flanges K. The flanges F of the shoe E are adapted to engage the flanges K of the track or strip H.

The operation of the device is as follows: The case of the door-check is mounted, as shown, on the jamb of the door, and the arm engages, as described, by means of the shoe E, the track H of the door. The shoe in the closed position is, as shown in Fig. 1, at one end of the track H. As the door is drawn open the shoe travels to the other end, Fig. 3. When the door is released, the spring in the case tends to draw the door in the reverse direction. As the flanges F of the shoe E engage the flanges K of the track H the door will be drawn inwardly by the arm B. The check in the case A regulates the movement of the arm B under the tension of the spring in a well-known manner and prevents too rapid movement of the door in closing. By this construction the shoe E is in constant connection with the track H of the door.

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

1. In a combined door check and spring, the combination with the rotary spindle thereof; of a track on said door; an arm rigidly secured to said spindle to rotate therewith; and a shoe having a non-rotary sliding connection with said track and a pivotal connection with said arm, substantially as described.

2. In a combined door check and spring,

the combination with the rotary spindle thereof; of an arm rigidly secured thereon to rotate therewith; a shoe U-shaped in cross-section pivotally connected to said arm and having laterally-projecting flanges; and a track having longitudinal flanges constructed to engage the lateral flanges of said shoe, whereby the shoe may travel longitudinally on said track during the opening or closing of the door, substantially as described.

In witness whereof I have hereunto set my hand on the 19th day of June, 1905.

JOHN H. SHAW.

Witnesses:

WILLIAM H. KIRSCHNER,

ALICE A. WILSON.