

(No Model.)

N. O. BOND.

DOOR CHECK.

No. 324,452.

Patented Aug. 18, 1885.

Fig. 1.

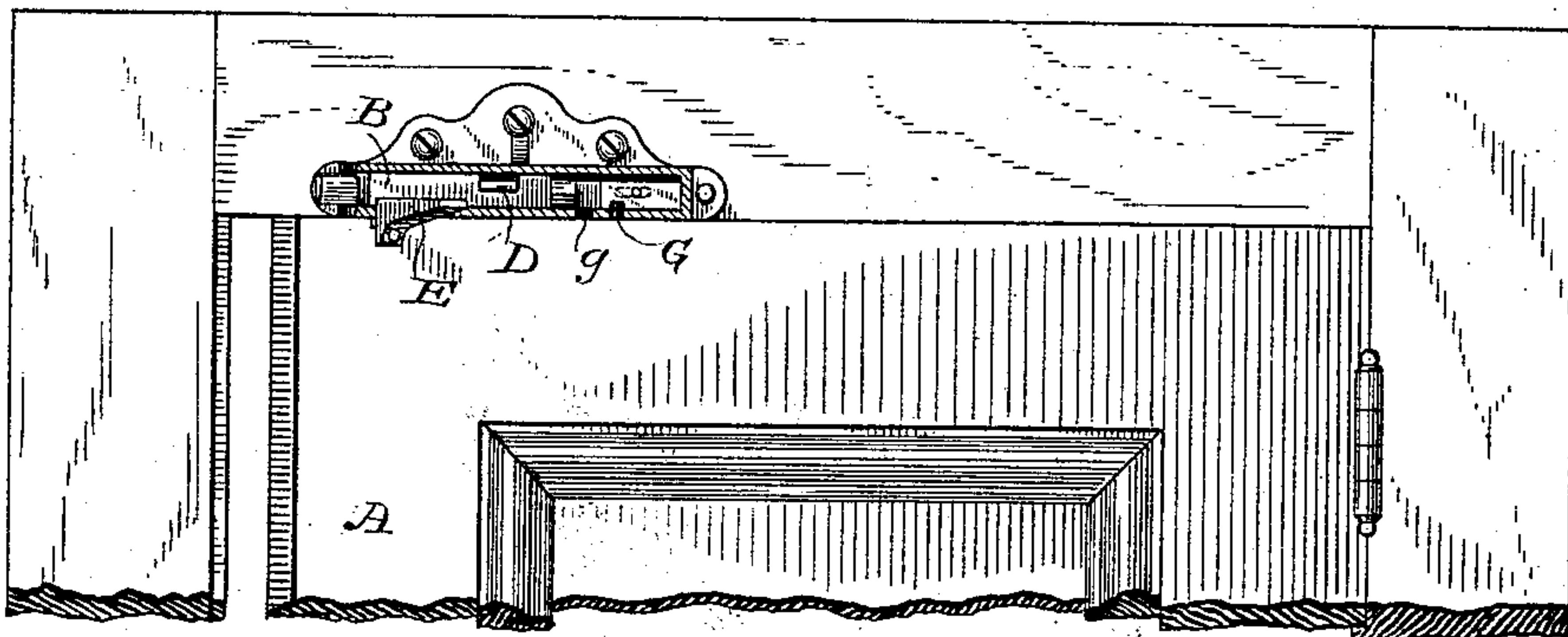


Fig. 2.

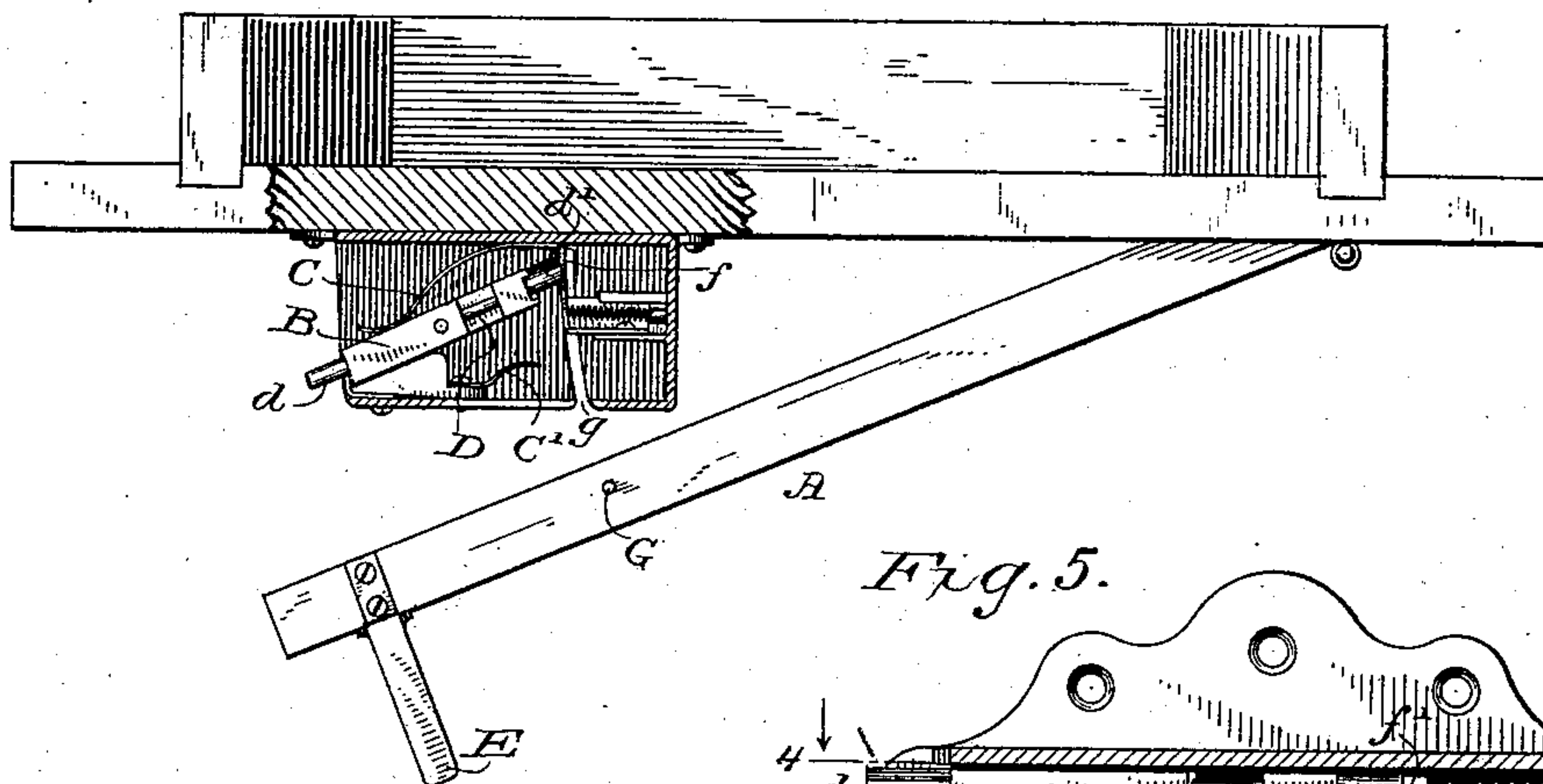


Fig. 3.

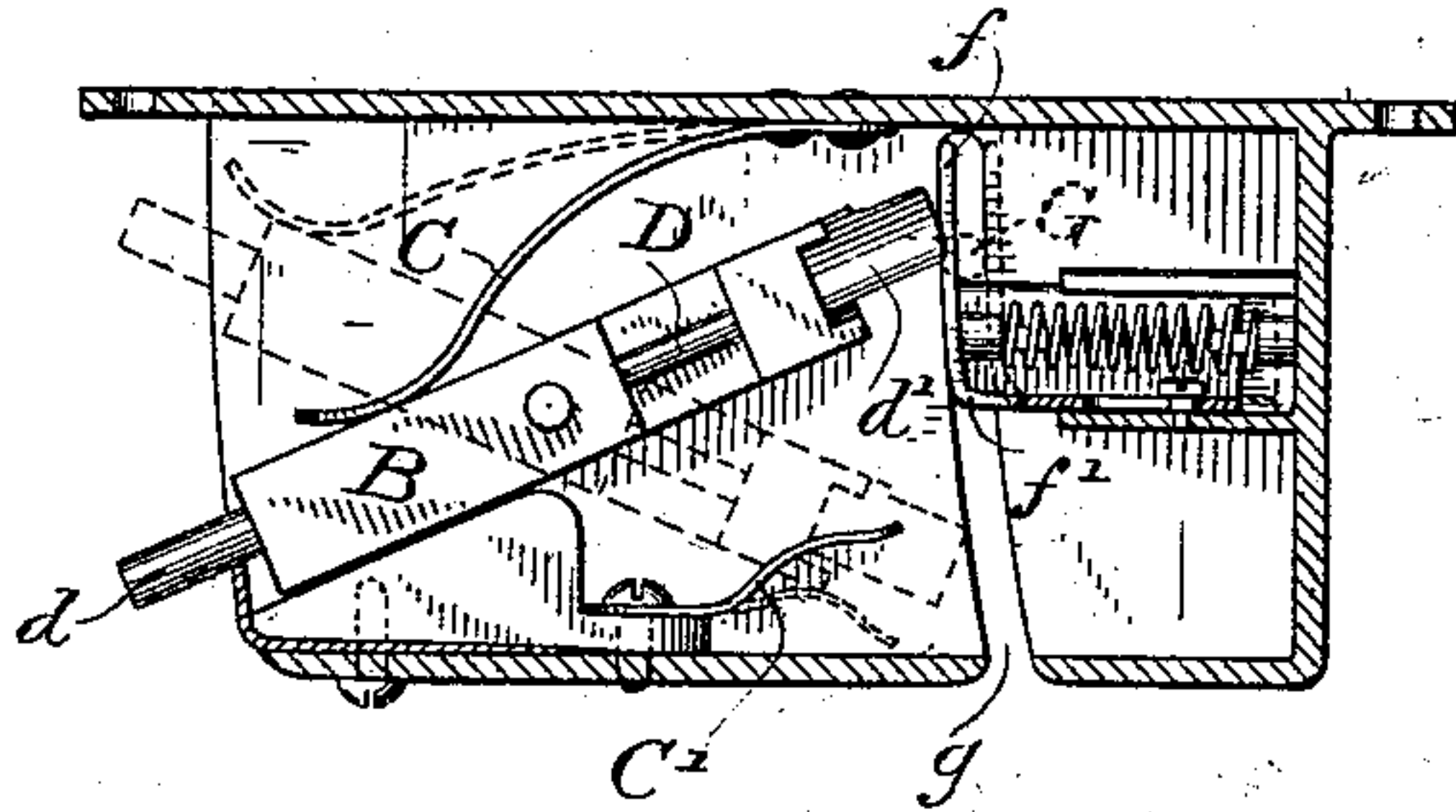


Fig. 5.

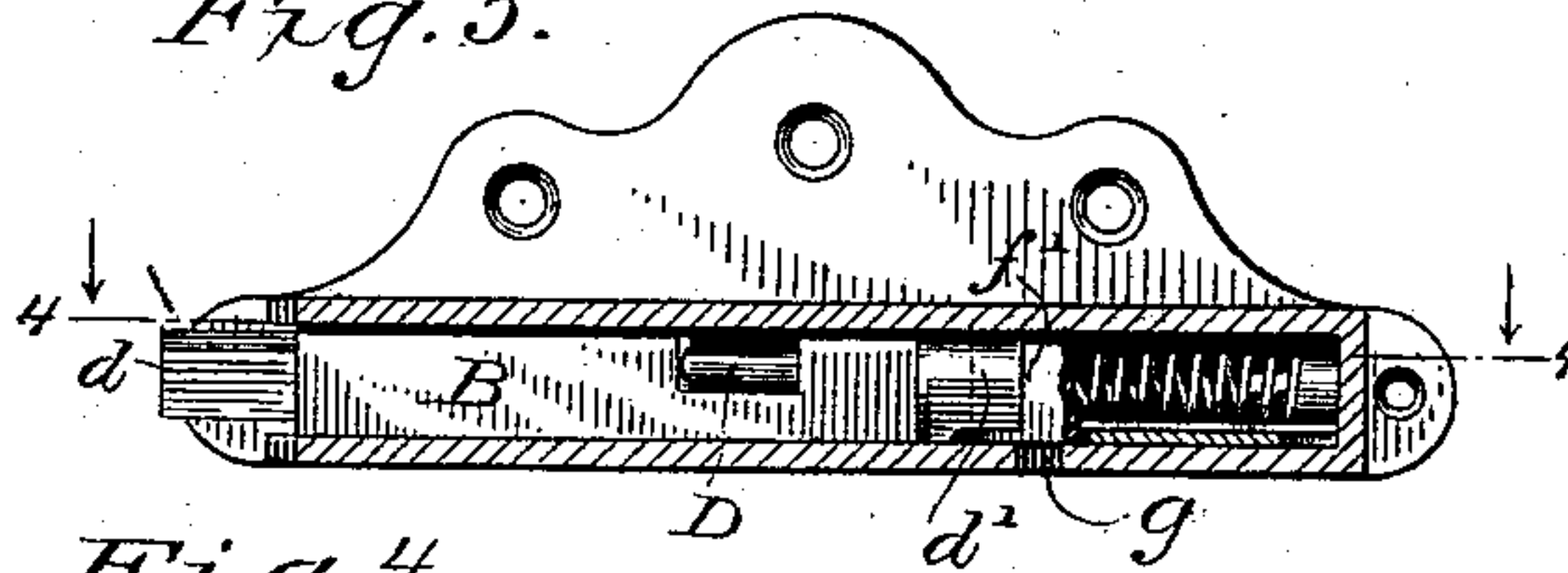


Fig. 4.

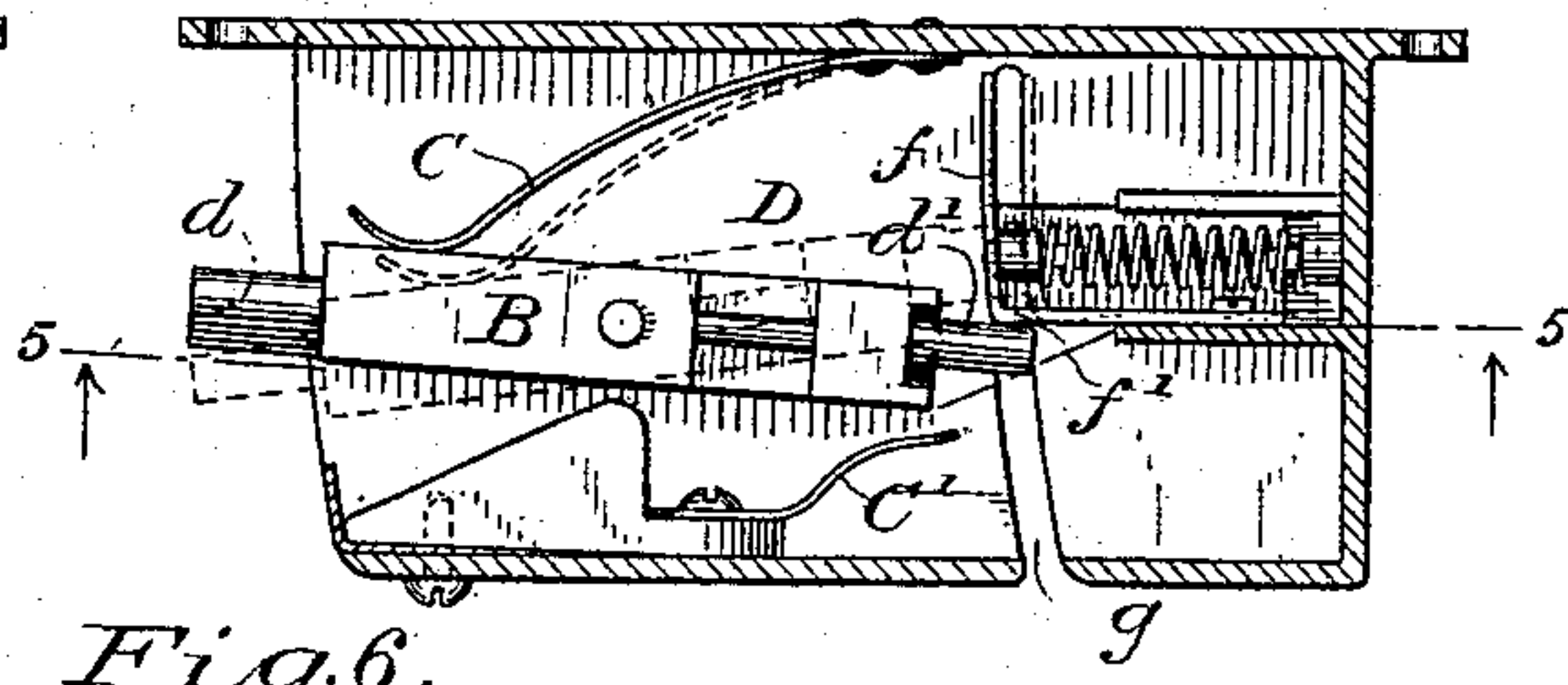
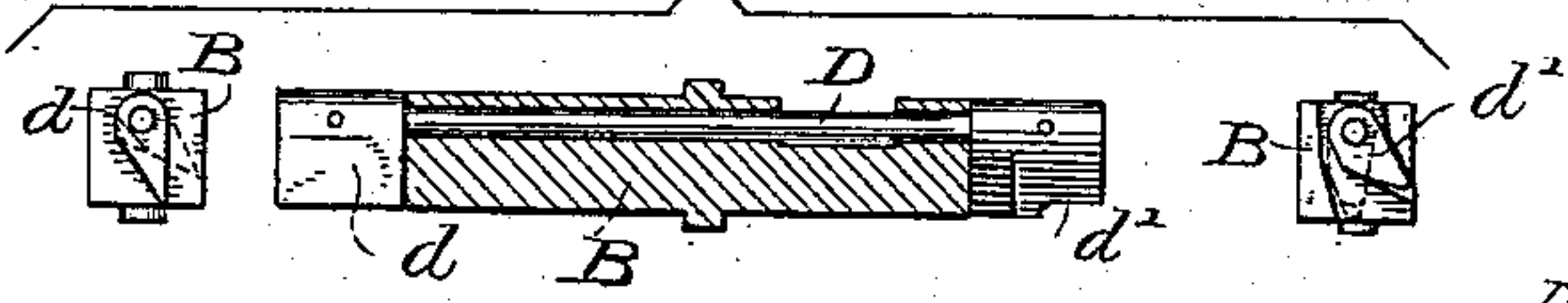


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

NATHAN OSCAR BOND, OF FAIRFAX COURT-HOUSE, VIRGINIA.

DOOR-CHECK.

SPECIFICATION forming part of Letters Patent No. 324,452, dated August 18, 1885.

Application filed September 12, 1884. (No model.)

To all whom it may concern:

Be it known that I, NATHAN O. BOND, a citizen of the United States, residing at Fairfax Court-House, in the county of Fairfax and State of Virginia, have invented certain new and useful Improvements in Door-Checks, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to certain new and useful improvements in door-checks for preventing the slamming of doors actuated by a closing-spring; and it consists in a pivoted arm held in position by a strong buffer-spring and carrying a catch adapted to turn after the first impulse to such position that the door can close on the second, together with devices for automatically setting the check when the door is opened. Doors held normally closed by a spring slam disagreeably when opened and released; and the object of my present invention is to overcome this by an automatic device, to which end I provide the construction and arrangement of parts, as hereinafter more fully described, and specifically shown in the drawings herewith, in which—

Figure 1 is an elevation, partly in section. Fig. 2 is a plan view with the top plate of the check removed. Figs. 3, 4, 5, and 6 are detail views of the check in various positions.

Like letters of reference have been applied to similar parts.

A represents a door properly hinged and actuated by suitable closing-spring. B is a pivoted arm suitably supported and held normally in place by a strong buffer-spring, C, which bears against its outer end. At its inner end a supplementary buffer-spring, C', takes part of the shock when the door closes with much violence, and prevents a slam even when the strength of the first buffer-spring is overcome. The pivoted arm B carries through its center a shaft, D, to the ends of which are rigidly attached the catches d and d' , the outer of which, d , lies in the path of a piece, E, attached to the top of the door, and which, for convenience, I will call the "track." The end of the inner catch, d' , when the device is set, rests against an inclined surface, f , which moves laterally and is projected into the path of the said inner end of the arm B by a spring, F, located at the inner end of the check. This

automatic setting device I have, for convenience, called a "spring-trigger," of which F is the spring, f the surface against which the end of the catch d' rests when the device is set, and f' the heel against which the face of the said catch d' rests and is held by the spring C, thereby turning the catch d out of the path of the projection E while the door is in the act of closing, the said trigger being retracted by a second projection, G, on the door, which strikes and follows the inclined surface and compresses the spring F in the act of closing. Upon the top of the door, at a suitable point, is located the pin G, which travels in the slot g in the bottom plate of the check when closing the door. This pin passes under the catch d' , (which is cut away sufficiently to allow it to do so,) and, striking the inclined face f of the trigger, presses it back until the catch is released at the heel, when the arm B, forced forward by the main spring C, resumes its normal position. It is to be understood that the two catches are placed at such an angle that the outer one will engage the track upon the first impulse, and that the inner—resting against the heel f' , as in Fig. 4, after this impulse—will turn said catch d so that it will clear the track upon the second impulse, allowing the arm B to resume its normal position the moment the trigger is retracted by the pin G as the door closes.

The operation of my device will be as follows: The door having been opened and released, upon the first closing impulse the inner end of the track E engages the catch d and carries the bar B forward. This movement depresses the buffer-spring, (or springs, according to the force of the closing door,) and upon their throwing the door back to a partly-open position the catch d' strikes the heel f' of the trigger. This heel being vertical, the catch d' is turned to a similar position. Now, since the catch d is at an angle with d' , when the latter is thus turned the former is thrown into such a position that it clears the track upon the second impulse. The door, having nothing to prevent, now closes to and latches. When it is again opened, the catch d rides on the track to the end, and drops down into normal position as soon as it has passed.

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

1. A device for preventing the slamming of doors, consisting of a pivoted arm backed by a buffer-spring and having movable catches at each end of said arm, the outer one of which is adapted to engage a projection on the door at the first impulse and to clear it at the second, and an automatic device located in the path of one of said catches and liberated by said first impulse, whereby the outer catch is placed in position to allow the closing of the door, substantially as described.

2. In a door-check, the combination, with the pivoted arm B, buffer-spring C, and a shaft, D, passing through the pivoted arm and car-

rying catches at each of its extremities, of the trigger F, having heel *f*, and a suitable pin, G, substantially as set forth.

3. In a door-check, the pivoted arm B and buffer-spring C, in combination with the supplementary buffer-spring, C', for the purpose set forth.

4. In a door-check, the trigger F, having heel *f'*, for the purpose set forth, in combination with the pin G, slot *g*, and the pivoted arm B, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

NATHAN OSCAR BOND.

Witnesses:

H. A. HALL,
N. L. COLLAMER.