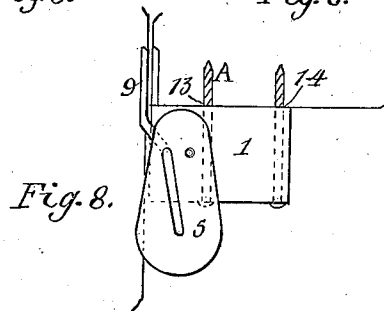
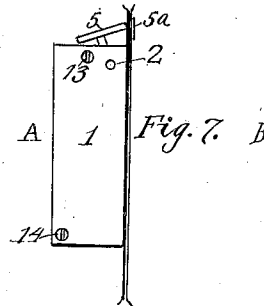
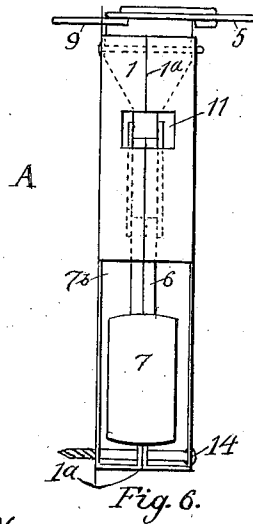
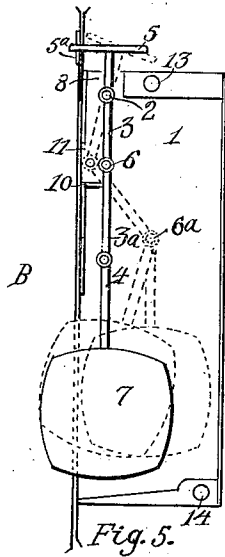
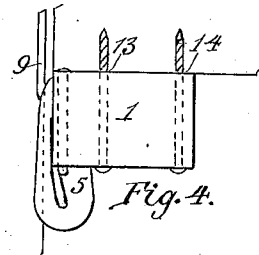
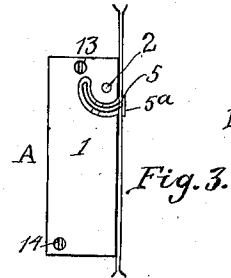
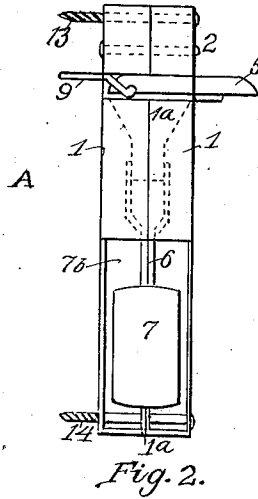
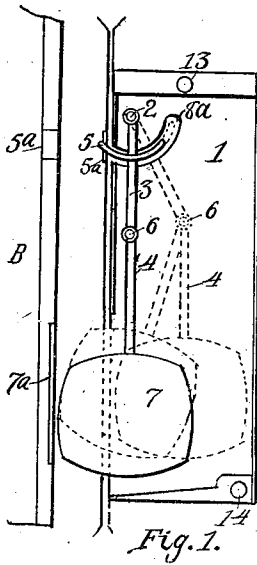


J. O. NASLIN.
DOOR CHECKING DEVICE.
APPLICATION FILED JAN. 21, 1920.

1,360,008.

Patented Nov. 23, 1920.



Inventor
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UNITED STATES PATENT OFFICE.

JOHN O. NASLIN, OF SEATTLE, WASHINGTON.

DOOR-CHECKING DEVICE.

1,360,008.

Specification of Letters Patent. Patented Nov. 23, 1920.

Application filed January 21, 1920. Serial No. 352,976.

To all whom it may concern:

Be it known that I, JOHN O. NASLIN, a citizen of the United States, residing at 415 Taylor avenue, Seattle, in the county of King and State of Washington, have invented a new and useful Door-Checking Device; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the characters and references marked thereon.

My invention relates to the class of door checks for which an application for Letters Patent was filed by me September 22, 1919, Serial Number 325,378, designed for the use to check a door to prevent slamming, operative by the door so as to check its velocity when swift, and to permit its free closure when its movement is slow.

It contains the novel parts with which experiments were made at the time experiments were being made in the one described in said application, which were at the time considered impracticable and not worth patenting, but later experiments have, however, proven the contrary, in that, while this present device contains fewer and simpler parts, that consequently costs less to manufacture, it will, nevertheless, serve the same purpose fully as well, as the other one referred to. All of which I shall now proceed to describe, and more fully set out in the claims, as illustrated in the accompanying drawings, wherein—

Figures 1 and 5 are front views of the device with the front part of the casing removed, and the normal perpendicular position of the bumper and the arms are indicated by solid lines, and the inclined position of the bumper and the arms, as assumed when the striker is quickly struck, and the vertical position of the bumper in the casing, as assumed when the striker is slowly struck, are indicated by dotted lines.

Figs. 2 and 6 are side views of the device facing the door, with the striker and the bumper arms indicated by dotted lines, and bumper 7 indicated by solid lines.

Figs. 3 and 7 illustrate the device attached upon the door jamb, and Figs. 4 and 8 are top views of the device indicating the shape and position of the striker 5 and bumper guard 9.

In the several figures the same numbers and characters refer to the same parts.

I have provided for the mechanism of the device a casing 1, comprising two parts of about the same shape and size, with slits and openings therein for the striker and bumper members for right and left hand purposes, and so shaped and constructed as to combine into one compartment, each side or part having both sides and ends bent together to meet on a straight line drawn side-wise and end-wise through the casing, as indicated at 1^a, and the ends being furthermore bent inwardly into the casing forming flanges flush with the other bent parts with perforations for screws, as at 13 and 14, which will securely maintain both parts of the casing in an even and proper position, when by suitable screws inserted through said perforations the device is fastened onto the door jamb; and when unloosened, by this mode of construction, the mechanism of the device can very readily be removed and again inserted, as may be necessary for right and left hand uses, for a self-closing door.

Openings for this purpose have been provided in the two opposite parts at 7^b, 8 and 8^a, through which the striker and the bumper swing and operate; and an opening is also provided in the side facing the door, at 11, so as to allow the jointed ends of arm 3 and link 3^a required swinging space in that direction.

As previously intimated, by the means of suitable screws inserted through the perforations 13 and 14 the casing is fastened onto the door jamb A, as closely to the edge of the door B, as will properly clear its edge when opening and closing; and arm 3 is mounted in the casing 1 upon pivot 2, as near to the side thereof facing the door as will permit of the proper operation of the device, and suitably position a portion of the bumper 7 in the path of the self-closing door.

To the swinging end of said arm 3 is pivoted arm 4, at 6 in Fig. 1, and by means of a lever link 3^a, connected to said arm 3 at 6 and to said arm 4 at 6^a, and to the free end of this arm 4 is attached and suspended said bumper 7, which should be of some resilient material, such as rubber, or the like, which produces a recoil when struck, and by its own gravity and by said suspension means is adapted to be carried out of the reach of the door when the latter's move-

ment is slow and to remain in its path when its movement is swift, as hereinafter more fully will be described.

Suitable plates 5^a and 7^a are provided upon the edge of the door, to give it wearing protection where it engages with bumper 7 and what will be termed striker 5, as it is struck by the door, and which is rigidly fixed to said arm 3, either a short space below pivot 2, and projects through the front of the casing, as shown in Fig. 1, or is fixed to said arm 3 above said pivot 2, and is positioned above the top of the casing, as shown in Fig. 5, and is provided with a bumper guard 9, as shown in Figs. 4 and 8. Both said guard and striker are so shaped and positioned as to be easily pressed to the side by the swinging door, so as to properly swing the bumper arm 4 with the bumper 7 far enough from the edge of the door to be out of its reach when it moves to and from its closed position.

Bumper guard 9 is adapted to maintain the bumper positioned in the casing after the door passes striker 5 to a closed position, so that it may not swing back into the path of the door and obstruct its opening swing.

The mechanical combination of the device, as illustrated in Figs. 1 and 5, though somewhat modified in form of construction, where, as shown in Fig. 1, only the two pivoted arms 3 and 4 are employed and the striker 5 is positioned on arm 3 below pivot 2, while, as shown in Fig. 5, striker 5 is positioned on the upper end of arm 3 above the casing above pivot 2, and for that reason necessitates, besides the use of arms 3 and 4, the use of an intermediate lever link 3^a, connecting both said arms 3 and 4 at 6 and 6^a, and is provided with a lever fulcrum 10 whereby to accomplish the same result as with the two arms 3 and 4, namely to swing bumper 7 out of the path of the door, which is therefore evidently clear that both modes of construction involves the same principle.

With regard to the operation of the device, it may be stated further, that though the passing contact by the door with the striker 5, will more aptly swing the jointed end of arm 4 farther away from the door when the latter's movement is swift than when slow, the resulting effect occasioned thereby upon the bumper 7 is oppositely different when the movement of the door is swift than when it is slow. For in the former instance, when the door hits the striker 5 quickly, while, as stated, the jointed end of arm 4 is quickly swung out away from the door, the bumper being of heavier weight than said arm and suspended in a free perpendicular position, will not respond to the quick movement of the said jointed end of arm 4, and instantly swing in its direction, but rather by the effect of its quick movement, will momentarily swing in

the opposite and an upward direction; while the door meantime swings onward on its closing course and strikes the bumper in the inclined position, shown by dotted lines in Figs. 1 and 5, with one or more resulting recoils, until it is finally slowed down enough in its closing movement to but gently press the striker out of its way, and thereby swing the bumper out of its closing course before it has time to strike it, and thus will slowly go closed without any objectionable slamming.

Evidently some of the details of the construction of the device might be otherwise modified in shape and form without, however, changing the principles involved.

I do not therefore wish to be understood as to limiting the scope of my invention to the exact design herein shown. The mechanical combinations herein are showing only the embodiment of my invention which I now believe to be the best to use.

What I claim is:

1. In a door check, a suspended striker-arm jointed to a bumper-arm having a bumper fixed to its swinging end and swingingly suspending said bumper in the path of a closing door, a striker fixed to said striker-arm engageable by the door to incline said bumper in the path of the door, and to swing said bumper out of the path of the door only when the latter's movement is slow; and a bumper guard operative by the door to retain said bumper out of the swing of the door, when by said door said guard is encountered.

2. In a door check, a bumper-arm jointed to a suspended striker-arm, a bumper fixed to the swinging end of said bumper-arm, pivoting means supporting said arms, means fixed on said striker-arm engageable by the door to incline said bumper in the path of the door, and to swing said bumper out of the path of the door when said means is lightly struck by the door; and a bumper guard operative by the door for retaining said bumper out of the swing of the door between said striker and the door jamb.

3. In a door check, a bumper fixed to the free end of a bumper-arm jointed to a swingingly suspended striker-arm, whereby said bumper is swingingly positioned in the path of a closing door, a striker fixed to said striker-arm engageable by the door, to swing said bumper out of the path of the door, and to incline said bumper in the path of the door only when thereby the said striker is quickly struck; and a bumper guard operative by the door to retain said bumper out of the swing of the door, when the latter passes said striker to a closed position.

4. A reversible casing, containing a pivoted striker arm operative through openings therein, and a bumper arm jointed to said striker arm vertically suspending a bumper in the path of a swinging door, to be by

means of said striker arm inclined in its path to check by recoil its closing movement, and adapted to be vertically positioned in said casing outside of the path of said door, when the said striker is gently struck.

5 5. A reversible casing and a door checking bumper fixed to supports pivoted in said casing vertically suspending said bumper in the path of a self-closing door, and means
10 fixed to said supports actuated by said door whereby said bumper is inclined in the path of said door to check by recoil its movement, and whereby it is vertically positioned in said casing outside of the swing of said door,
15 and a bumper guard on said means for retaining said bumper in said casing when the said door passes said means to a closed position.

6. A door checking bumper fixed to swinging supports pivoted in a casing vertically
20 suspending said bumper in the path of a closing door, and means fixed to said supports actuated by said door to incline said bumper in the path of said door to check
25 by recoil its closing movement only when said means is quickly struck by said door, a retaining guard on said means to position said bumper in said casing when said door passes said means to a closed position, and
30 plates on the edge of said door to engage said bumper and said means.

7. A door checking member attached to a jointed support pivoted in a casing vertically
35 suspending said member in the path of a swinging door, and means operative through openings in said casing actuated by said door to incline said member in the path of said door to check by recoil its closing
40 movement, and to swing said member into the said casing when the said means is gently struck by said door, a guard on said means

to retain said member outside of the path of said door when it passes said means to a closed position, and protecting means on the edge of said door to engage said means and
45 said member.

8. In a door check, a bumper fixed to jointed supports pivoted in a reversible casing vertically suspending said bumper in the path of a closing door, said casing, and a
50 striker fixed to said supports actuated by said door through openings in said casing, to incline said bumper in the path of said door to check by recoil its closing course, when said striker is quickly struck by said
55 door, and to vertically position said bumper in said casing outside of the path of said door when by said door the said striker is lightly struck; plates fixed on the edge of said door to engage said bumper and striker,
60 and a guard on said striker-arm for retaining said bumper outside of the swing of said door when it passes said striker to a closed position.

9. In a door check, a reversible two-part
65 casing containing one compartment, a door checking member fixed to jointed link-supports pivoted in said casing and vertically suspending said member in the path of a closing door, a striker arm mounted on said
70 supports engageable by the door to incline said member in the path of said door to check by recoil its closing movement, and to position said member in said casing outside of the path of said door only when by
75 said door the said striker is lightly struck, a guard on said striker-arm for retaining the said member outside of the path of said door when it passes said striker to a closed position, and plates fixed to the edge of said
80 door to engage said striker and said member.

JOHN O. NASLIN.