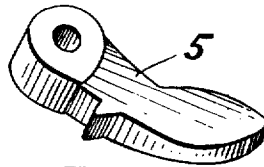
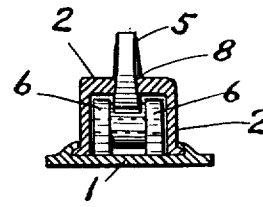
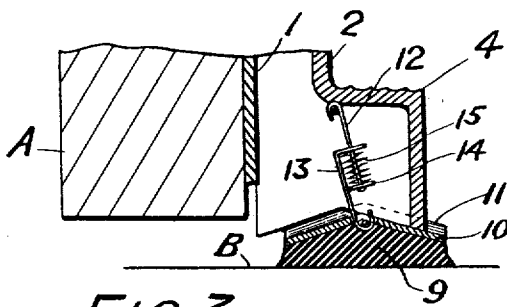
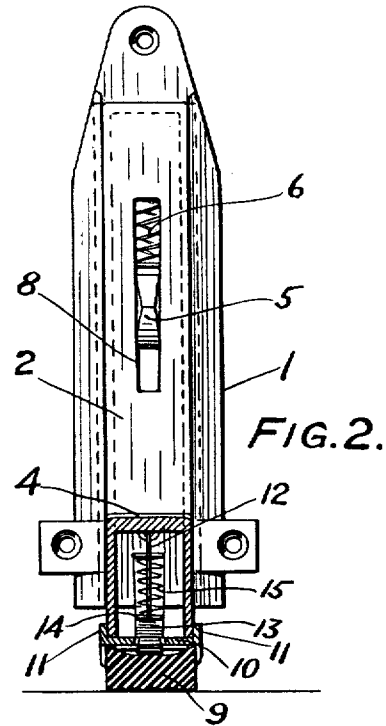
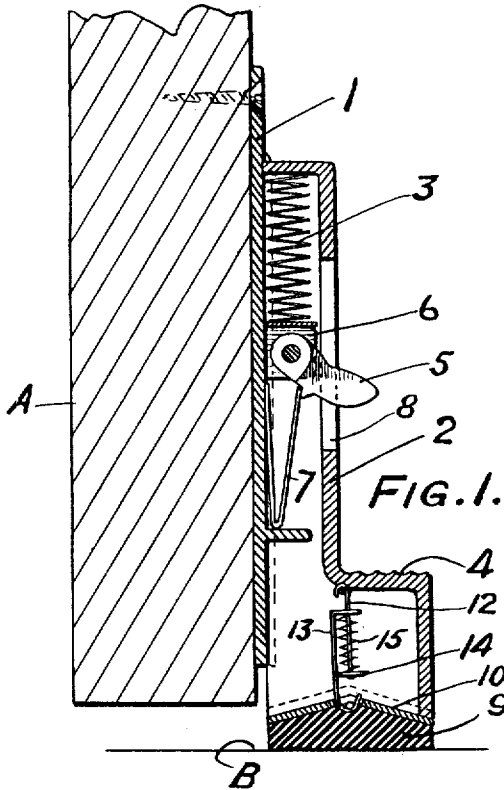


1,014,817.

Patented Jan. 16, 1912.



WITNESSES:

Robt. R. Kitchel.

Frank French.

FIG. 5.

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JOSEPH C. EARNSHAW, OF GERMANTOWN, PENNSYLVANIA.

DOOR-CHECK.

1,014,817.

Specification of Letters Patent.

Patented Jan. 16, 1912.

Application filed April 7, 1911. Serial No. 619,494

To all whom it may concern:

Be it known that I, JOSEPH C. EARNSHAW, a citizen of the United States, and a resident of Germantown, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Door-Check, of which the following is a specification.

Objects of the present invention are to provide a device which will operate to positively hold a door in open position, regardless of the character of the floor surface with which it coöperates for that purpose; to provide a device for holding doors in open position, which when brought into engagement with the floor will automatically lock itself in the position to which it is brought for that purpose without any play or retrograde movement, and to provide a simple, efficient and reliable door check or holder which shall be easy of manipulation and positive in action under all conditions of service.

Generally stated the invention comprises the combination with the bolt of two wedge-like devices, one of which serves to prevent the end of the bolt from slipping on the floor and the other of which serves to automatically hold the bolt against retrograde motion when it is brought into engagement with the floor and both of which can be readily released when required.

The invention will be claimed at the end hereof, but will first be described in connection with the embodiment of it, but not the only embodiment of it, selected for illustration in the accompanying drawings, in which—

Figure 1, is an elevational view, principally in central section, illustrating a door holding device or check embodying features of the invention. Fig. 2, is a front view of the same partly in section. Fig. 3, is a side view, partly in section, illustrative of the operation of the device. Fig. 4, is a transverse sectional view showing details of construction, and Fig. 5, is a perspective view of a pivotal wedge lever.

In the drawings 1 is the keeper and 2 is the bolt, endwise slidable in respect thereto and normally solicited or impelled into retracted position, that is, elevated position in the drawing, by the spring 3. The bolt is shown as provided with an offset 4 by means of which it can be pushed down against the force of the spring 3.

5, is a wedge lever pivoted at one end to the keeper 1, or more accurately, to ears 6 connected therewith. The free end of this lever 5 is normally projected by the spring 7 upward and outward through a slot 8 in the bolt 2. The slot 8 may be a trifle wider at the top than it is at the bottom, for example though not by way of limitation, a thirty-second of an inch. The lever 5 is wedge-like in the sense that the effective portion of it tapers from the pivot toward the point. The lever 5, is therefore of wedge form and its faces which coöperate with the side walls of the slot 8, are wedge-like faces, or otherwise expressed, they are the inclined faces of the wedge lever.

9, is a shoe which may be of material such as rubber. It has wedge connection with the end of the bolt. As shown the shoe is carried by a saddle 10 which rides on the end, or more accurately, the end of the side walls of the bolt 2. The abutting surfaces of the saddle and side walls are of reverse wedge form. The saddle is shown as provided with ears 11 which prevent it from moving crosswise, but permit it to move lengthwise.

12 and 13 are links of which 12, works through an opening in 13. Interposed between a collar 14 on the end of the link 12 and the bent end of the link 13 is a spring 15 and this link and spring mechanism affords the shoe a limited range of endwise motion in respect to the bolt and at the same time returns and holds it to place.

In use the keeper is secured to a door A and in order to check or hold the door open, the bolt 2 is pushed down until the shoe 9 is brought into contact with the floor B. This can be done by pushing with the foot on the projection 4. During this motion of the bolt the lever 5 turns downward and unwedges itself in respect to the side walls of the slot 8. However, as soon as the foot is released the lever 5 being turned upward by its spring 7, wedges itself between the side walls of the groove, thus holding the bolt firmly in the position to which it has been brought. The wedging action is such that there is no perceptible retrograde movement or lost motion of the bolt, on the contrary it is wedged and held in the exact position to which it has been pushed. For the sake of a further description it may be said that the spring 7 at all times causes the lever 5

to hug the edge portion of the slot 8 and there is no space between the edge of the lever and the edge of the slot, such as would prevent all upward movement of the bolt.

5 With the shoe 9 in contact with the floor and the bolt locked down by the lever 5, it is evident that if the door should tend to move, one or the other of the wedge surfaces between the shoe and the end of the
10 bolt would operate to tighten the connection with the floor. This is illustrated in Fig. 3. To retract the bolt and free the door, the projecting end of the lever 5 is pushed down as by the foot and when this
15 lever 5 is thus turned down it frees the side walls of the slot 8, whereupon the bolt rises under the influence of its spring 3.

What I claim is:

20 1. A door check or holder comprising the combination with a casing and its spring actuated slotted bolt of a spring actuated pivotal wedge lever having its wedge like faces arranged for coöperation with the side walls
25 of the slot of the bolt and with a shoe adapted to move in respect to the end of the bolt

and having inclined or wedge-like sliding surfaces between it and the end of the bolt.

2. In a door check or holder the combination of a spring actuated bolt having a longitudinally ranging slot therein and a
30 spring actuated pivotal lever protruding through the slot and having a wedge-like portion adapted to coöperate with the side walls of said slot.

3. In a door check or holder the combination with a bolt and means for locking it, of
35 a shoe arranged at the end of the bolt and having between it and the end of the bolt a double wedge surface of sliding contact, an extension spring coupling between the
40 shoe and bolt for affording the shoe a limited range of movement, and for automatically returning it to normal position upon release of the bolt.

In testimony whereof I have hereunto
45 signed my name.

JOSEPH C. EARNSHAW.

Witnesses:

S. E. PATTERSON,
FRANK E. FRENCH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."