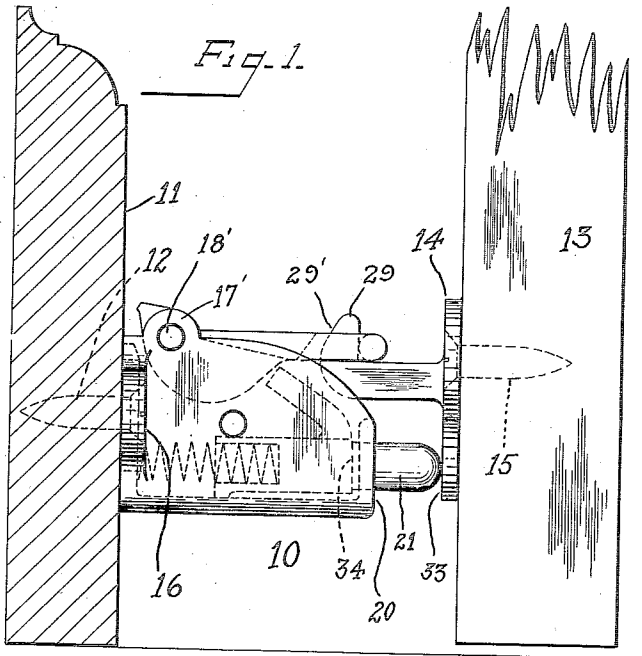
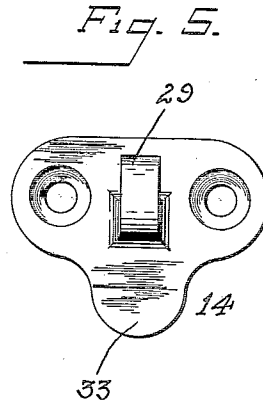
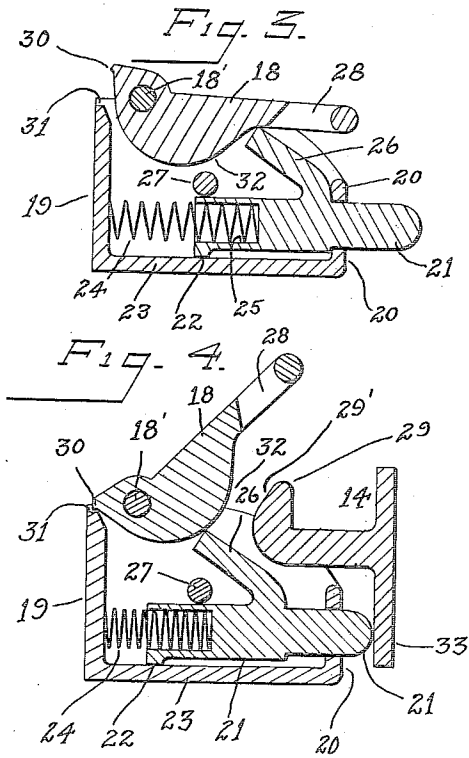
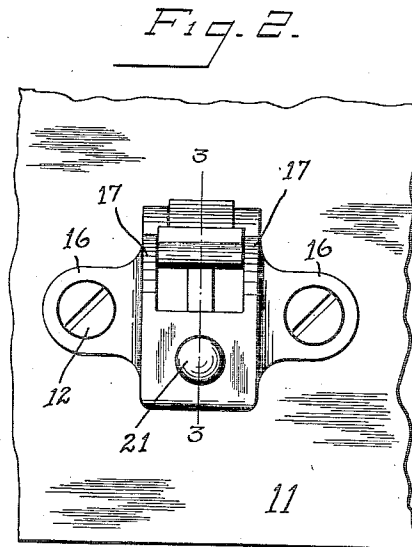


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 AUTOMATIC DOOR HOLDER.
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1,309,310.

Patented July 8, 1919.



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AUTOMATIC DOOR-HOLDER.

1,309,310.

Specification of Letters Patent.

Patented July 8, 1919.

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To all whom it may concern:

Be it known that I, HENRY G. VOIGHT, a citizen of the United States, residing in New Britain, county of Hartford, and State of Connecticut, have invented certain new and useful Improvements in Automatic Door-Holders, of which the following is a full, clear, and exact description.

This invention relates to an automatic door holder and more particularly to a device for positively holding a door in its open position and for automatically releasing said door when a slight further rearward motion is imparted to said door.

The primary object of my invention is to provide a strong, durable automatic door holder for positively holding a door in its open position, with means independent of the holding mechanism to release the door automatically when a slight rearward motion is imparted to the door.

A more specific object of my invention is to provide positive gripping means for automatically holding a door in its open position, with a spring operated plunger for preventing rattling between said gripping means, and to provide means operated by said plunger for releasing said door.

To these and other ends, the invention consists in the novel features and combinations of parts to be hereinafter described and claimed.

In the accompanying drawing:

Figure 1 is a side elevation of my automatic door holder mounted upon a baseboard or the like and shown holding a door in its open position.

Fig. 2 is a front view of my holder mounted upon a baseboard or the like, the door being released from the same.

Fig. 3 is a sectional view taken on line 3—3 of Fig. 2.

Fig. 4 is a vertical sectional view through the automatic holder and its cooperating hook, the parts being shown in their released position, and

Fig. 5 is a front view of the hook.

My automatic door holder may be briefly described as consisting of a body member rigidly secured either to a fixed member, (such as a baseboard), or to a swinging door, the body member being provided with a gravity operated holder pivotally mounted thereupon, and with a spring operated plunger slidably mounted upon the body member

and having an extension or the like cooperating with the pivoted holder for moving the same to its inoperative position when the plunger is forced inwardly a predetermined amount.

In the embodiment of my invention, which I have illustrated in the drawing, I have shown a shell-like body member designated in its entirety by the numeral 10, which is rigidly secured to a wall or baseboard 11 by means of screws 12, and upon the door 13, I have shown a hook member designated in its entirety by the numeral 14, which is secured to the door by screws or the equivalent 15. The body member 10 is preferably provided adjacent its rear end with outwardly projecting ears 16 having drill holes formed therethrough to receive the screws or the equivalent 12, above mentioned, whereby the body member may be rigidly secured to the wall or door, as may be desired, it being understood that the body member 10 and hook 14 are interchangeable, in that either may be mounted upon the door 13, or the fixed member 11, to which the door is to be connected when held in its open position, it usually being desired, however, to mount the body member 10 upon the fixed member and the hook 14 upon the swinging door. The body member 10 is preferably provided with spaced vertical walls 17, between which is pivotally mounted a latch or holder 18 by means of a pin 18' having its opposite ends riveted in the upwardly directed ears 17' formed upon the members 17. This body member is also preferably provided with a rear wall 19 and a relatively low front wall 20. Within the body member 10 is slidably mounted a plunger 21, the outer end of which is slidably mounted in a hole formed through the front wall 20, the rear end of this plunger is provided with a lug 22, which slidably engages the floor or bottom 23 of the shell-like member 10. The plunger 21 is normally protracted, as shown in Fig. 3, by means of a coiled spring 24, one end of which abuts against the inner face of the wall 19, and the other end of which is seated in a socket 25, formed in the rear end of the plunger. Upon the upper face of the plunger 21 is formed an extension 26, which extends upwardly and rearwardly, as shown in the drawing. The sliding plunger 21 may be retained in its operative position within the body member, by any desired means,

such as a pin 27, which has its ends riveted in the opposite side wall 17, and is positioned to engage the upper face of the plunger 21, as shown.

5 The pivoted latch or holder 18, above mentioned, is preferably gravity operated, and has an opening 28 formed in its outer end adapted to receive the upwardly directed end 29 of the hook member 14. The rear
10 end of the latch 18 is preferably provided with a lip 30 adapted to abut against the upper edge 31 of the rear wall 19, and thereby limiting the extent to which the forward
15 end of the latch may be rocked in an upward direction. The under face of the latch 18 is provided with a rounded downwardly projecting portion 32, which coöperates with the end of the extension 26 in a manner hereinafter pointed out.

0 The operation of my device is as follows:

When the door 13, upon which the hook 14 is mounted, is opened sufficiently, the outer inclined face 29' of the hook member will engage the outer rounded end of the
25 gravity operated latch 18, and will raise this latch sufficiently to permit the opening 28 formed in the same to drop into positive gripping engagement with the upwardly directed end 29 of the hook member 14, whereupon the door will be positively held in its
30 open position. In order to prevent any rattling that might be produced between the hook 14 and the latch 18 by a slight movement of the door 13, the spring operated
35 plunger 21 is provided, the outer end of which abuts against a downwardly projecting portion 33, formed upon the base plate of the latch 14. The outwardly projecting end of the plunger 21 is of sufficient length
40 to abut against the member 33 before the hook member is positively engaged by the latch 18, as will be clear from an inspection of Fig. 1, in which the plunger is shown in dotted lines as moved inwardly slightly by
45 its engagement with the member 33, the shoulder 34 upon the plunger being shown out of abutting engagement with the inner face of the wall 20. The object in providing the extension 26 upon the sliding plunger
50 and the coöperating rounded portion 32 upon the latch 18 is to automatically release the door 13 when a pressure is exerted upon the same in a rearward direction sufficient to retract the sliding plunger 21. The manner in which the latch 18 is disengaged from
55 its hook is clearly illustrated in Fig. 4 of the drawing, in which figure it will be seen that the hook member 14 has been moved toward the body member 10 sufficiently to force the plunger inwardly, as shown, whereupon the outer end of the extension 26 is brought into contact with the rounded
60 portion 32 of the latch member and the latch is thereby swung upwardly out of engagement of the hook member. As soon as the

latch 18 has been disengaged from the hook, in the manner just described, the spring operated plunger 21 will move the door in a closing direction sufficiently to prevent the
70 latch member 18 from dropping into engagement with the outer end 29 of the hook member. When the door is not held in an open position, the latch 18 normally lies in substantially a horizontal position, as shown
75 in Fig. 3 of the drawing, and may be supported in this position by the outer end of the extension 26, which engages the under face of the latch member.

Although the above description is necessarily directed to a specific embodiment of
80 my invention, it will be apparent that various changes may be made in the device herein disclosed without departing from the scope of my invention, as defined in the annexed claims. 85

What I claim is:

1. In an automatic door holder, a body member, a plunger slidably mounted therein, a holder pivotally mounted upon said body member above said plunger, means movable
90 into and out of positive gripping engagement with said pivoted holder, and an upwardly projecting extension upon said plunger positioned to engage said holder and move the same out of engagement with said
95 first mentioned means.

2. In an automatic door holder, a fixed body member, a plunger slidably mounted therein, a holder pivotally mounted upon said body member and provided with a projecting rounded portion, means mounted
100 upon a door and movable into and out of positive gripping engagement with said pivoted holder, and means upon said sliding plunger positioned to operatively engage said rounded portion to release said first
105 mentioned means from said pivoted holder.

3. In an automatic door holder, a body member, a plunger slidably mounted in said body member, a gravity operated latch pivotally mounted on said body member, a rounded projection formed upon said latch
110 between the outer end of the same and its pivot, a hook member movable into and out of positive gripping engagement with said latch, and means upon said plunger coöperating with said projection to release said
115 hook member from said latch.

4. In a device for automatically holding a door in its open position, a body member, a hook member, one of said members fixed and the other mounted upon a door and movable into and out of close proximity to
120 said fixed member, a latch pivotally mounted upon said body member, a spring operated plunger mounted upon said body member for preventing rattling between said hook member and latch, and means operated
125 by said plunger for releasing said hook member from said latch, comprising an up- 130

wardly projecting extension upon said plunger, and a cooperating rounded portion upon said latch positioned to be operatively engaged by said extension.

5 5. In an automatic door holder, a body member, a spring operated plunger mounted thereupon, a holder pivotally mounted upon said body member, means movable into and out of positive gripping engagement with
10 said pivoted holder, said plunger constructed to prevent rattling between said movable means and pivoted holder, and means operated by said plunger for moving said holder to its inoperative position when
15 said plunger is depressed a predetermined amount, comprising a rigid extension upon said plunger for supporting said holder, and a projection upon said holder positioned to be engaged by said extension when said
20 plunger is retracted.

6. In an automatic door holder, a hollow body member, a latch pivotally mounted

thereupon, a latch engaging member movable into and out of positive gripping engagement with said latch, a plunger slidably
25 mounted upon the floor of said body member, and means carried thereby positioned to abut against said latch to elevate the same as said plunger is operated.

7. In an automatic door holder, a body
30 member, a latch pivotally mounted thereupon, a latch engaging member movable into and out of positive gripping engagement with said latch, a plunger slidably
35 mounted in said body member, and a projecting portion upon said latch positioned to lie in the path of movement of said plunger to be operatively engaged by a rigid portion thereof, whereby the retraction of said
40 plunger swings said latch to its releasing position.

In witness whereof, I have hereunto set my hand on the 24th day of December, 1918.

HENRY G. VOIGHT.