Aug. 13, 1929. J. C. VANCE 1,724,438

DOORCHECK

Filed June 10, 1927

Fig. 1.

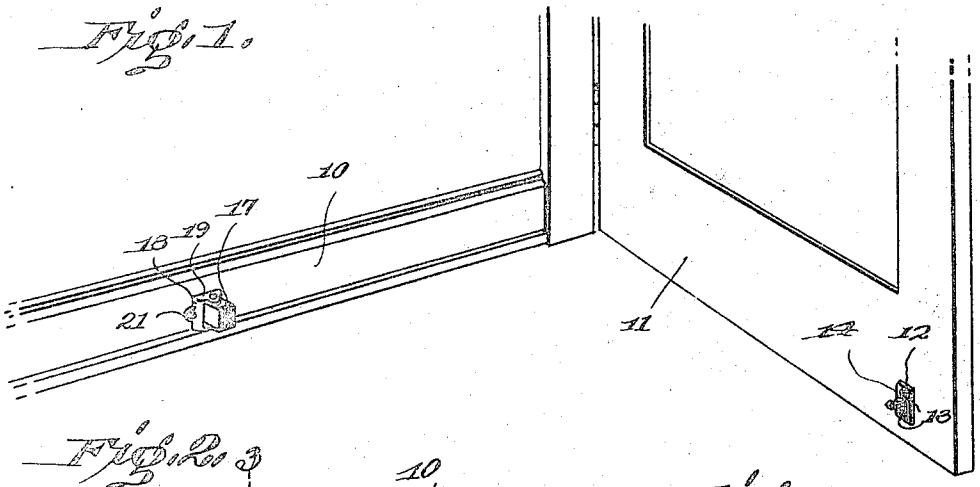


Fig. 2.

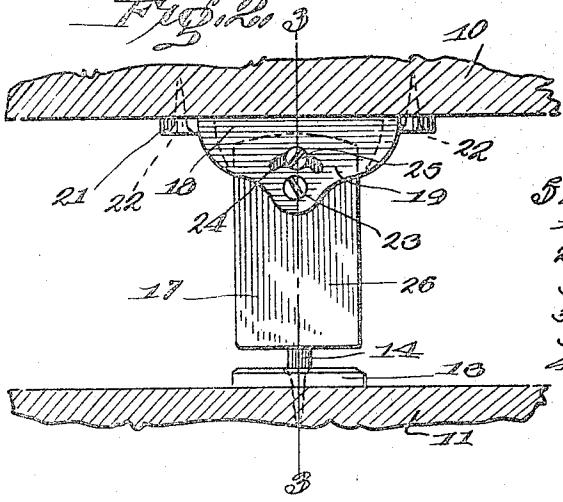


Fig. 3.

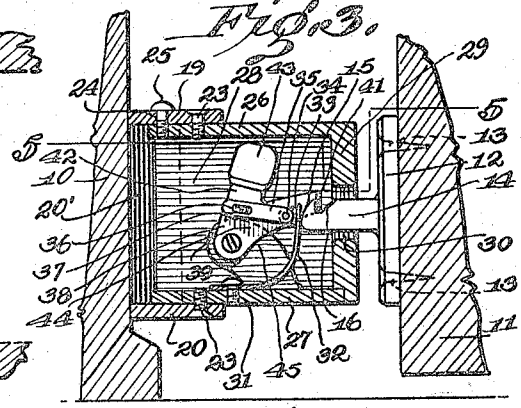


Fig. 5.

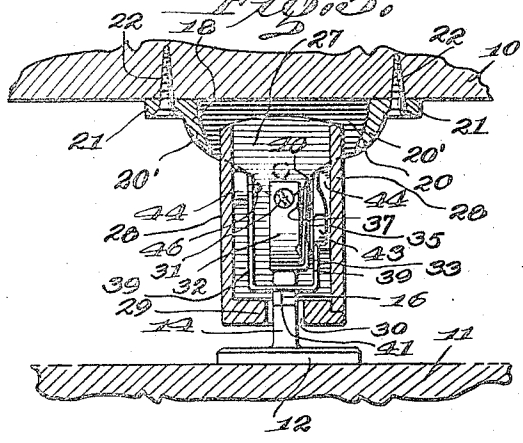
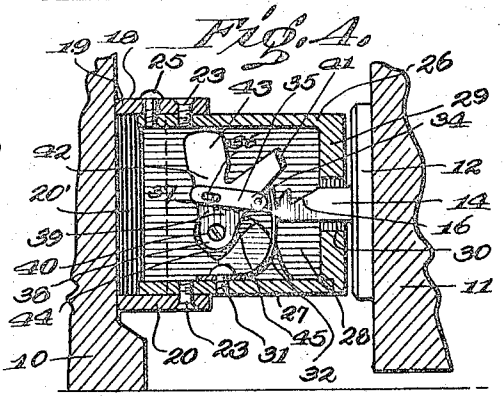


Fig. 4.



Inventor

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UNITED STATES PATENT OFFICE.

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DOORCHECK.

Application filed June 10, 1927. Serial No. 197,848.

The present invention relates to a door check, and aims to provide a novel and improved device of this character which will not only serve as efficient means for holding a door in open position, but will also act as a buffer or stop for the door.

Another object of the invention is the provision of a door check constructed so as to hold a door in open position and for permitting the releasing of the door upon a sudden, short movement thereof in a back and forth direction.

A further object of the invention is to provide a hook member carried by a door for engaging into a casing carried by a baseboard in order to hold the door in open position, said casing having means therein for engaging the hook and being adjustably mounted so as to permit proper engagement of the hook member with the latching means in the casing.

It is also an object of the invention to provide a device of the above indicated character, which is simple and substantial in construction, which can be manufactured economically, and which will be thoroughly efficient and practical in use.

With the foregoing and other objects in view, which will be apparent as the description proceeds, the invention resides in the construction and arrangement of parts, as hereinafter described and claimed, it being understood that changes can be made within the scope of what is claimed, without departing from the spirit of the invention.

The invention is illustrated in the accompanying drawings, wherein:

Figure 1 is a perspective view of a portion of a room showing my improved door check attached to the baseboard and to the door,

Figure 2 is a horizontal section taken above my door check, showing the door in open position,

Figure 3 is a vertical section taken on line 3—3 of Figure 2,

Figure 4 is a similar view showing the mechanism in the act of releasing the door, and

Figure 5 is a horizontal section taken on line 5—5 of Figure 3.

In the drawings, the numeral 10 designates the baseboard of a room, while the numeral 11 indicates a door, which support the two separate elements of my device in order to hold the door in open position.

In carrying out the invention, the numeral 12 designates a plate which is attached to the door by means of wood screws, or the like, 13. The plate 12 carries a hook 14, which has its free end arranged at an angle, as at 15. The notch 16 in the hook is in the upper side thereof.

Attached to the baseboard 10 at a point where the prong 14 will swing when the door is moved to an open position is an adjustable casing 17. The casing 17 is supported by a bracket 18 which consists of an upper plate 19 and a lower plate 20 which engage on opposite sides of the casing 17 and connecting members 20′ extending between said plates and having ears 21 thereon. Through the ears 21 are passed wood screws, or the like, 22, for securing the bracket to the baseboard. Through each of the plates 19 and 20, small screws 23 extend and are threaded into the upper and lower walls of the casing 17 for pivotally mounting the casing 17 to the bracket, while in either of the upper or lower plates 19 and 20 is arranged an arcuate slot 24 into which is arranged a screw 25. The screw 25 is threaded into the casing 17 and has a head thereon which engages the plates in order to bind the casing to the plate and prevent pivotal movement of the casing 17 with relation to the bracket. It can be seen that by loosening the screw 25, the casing may be swung to proper position, and that after the same is in proper position, the screw 25 may be tightened to hold said casing against further movement.

The casing 17 is rectangular and has top and bottom walls 26 and 27, side walls 28, and a front wall 29. In the center of the front wall 29 is an opening 30 into which the hook 14 is adapted to pass when the door is swung to its extreme open position. Mounted on the lower or bottom wall 27, by means of a screw or the like 31, is a leaf spring 32. One end of the leaf spring 32 extends upwardly and is adapted to be engaged by the end of the hook 14 when it protrudes through the opening 30 in the front wall of the casing. On the free end of the leaf spring is a rearwardly extending ear 33 which has pivotally connected thereto, as at 34, one end of a connecting link 35. The opposite end of the connecting link 35 is provided with a small slot 36 therein into which extends a pin 37. The pin 37 is carried by a pivoted latching member 38.

The pivoted latching member 38 is substantially U-shaped and has the opposite side portion 39 thereof pivotally connected, as at 40, to the opposite side 28 of the casing, while the bight portion 41 of said pivoted U-shaped latching member is adapted to engage into the notch 16 of the hook 14 in order to hold the door in its open position. On one of the side portions of said U-shaped latching member is an extension 42 which extends upwardly and is enlarged to provide a weight, as at 43. The extension is so arranged that the weight will be positioned on either side of the point of pivot of the U-shaped latching member so as to serve as a means for holding the U-shaped latching member in either one of its opposite positions.

The opposite side walls 28 of the casing have lugs 44 arranged thereon to which the opposite side portions of said U-shaped latching member are pivoted, while one of the lugs 44 is enlarged at its lower portion, as at 45, for forming a stop to limit downward movement of the U-shaped latching member in a forward direction. As the casing 17 is constructed in two sections, it is necessary to provide a pin 46 on one lug 44 for forming a pivotal connection to one side portion of said U-shaped latching member and a screw is used for forming the other pivotal connection. When the sections are separated, the screw will hold the U-shaped latching member to the portion of the casing the same is attached, while the pin 46 will move out of the opposite side portion of said U-shaped latching member due to the fact that the same has not a head thereon. It is to be noted that the bottom wall and the side wall into which the screw passes for pivotally supporting the U-shaped latching member are in the same section so as not to cause disengagement of said U-shaped latching member from the leaf spring 32 when disconnecting the casing 17.

In operation, it can be seen that when the door 11 is swung to its extreme open position the hook 14 will extend into the opening 30 in the front wall 29 of the casing 17. As said hook 14 enters the casing, the beveled face 15 thereon will first engage the bight portion 41 of the U-shaped latching member and raise the same. Upon further movement, said bight portion will drop into said notch 16 and hold the door against closing movement. When it is desired to close the door, the door is forced further towards the baseboard on which the casing 17 is mounted, which will cause the free end of the leaf spring 32 to be forced inwardly due to contact with the end of the hook 14. The spring 32 may be moved a short distance before effecting movement of the U-shaped latch member, due to the fact that a slot is provided in the connecting link 35 at the point where said link is connected to said U-shaped latching member. As soon as the pin 37 carried by the U-shaped latching member engages the end of the slot 36 in the link 35, said U-shaped latching member will be raised and the weight 43 on said U-shaped latching member will momentarily hold said U-shaped latching member in raised position, which will give sufficient time for the door to be pulled away from the baseboard before the bight portion 41 can engage in the notch 16 of the hook 14. Upon movement of the hook outwardly, the leaf spring 32 will immediately start to return to its normal position, but due to the fact that the slot 36 is provided in the link 35, the U-shaped latching member will not return until the pin 37 engages the end of the slot 36 in said connecting link 35. This is ample time for permitting the hook to be moved out of the opening 30 in the front wall 29. From the foregoing, it can be seen that in order to hold the door in open position the hook 14 is permitted to slowly enter the casing 17 and in order to release the door so as to permit the closing thereof, a quick movement of the door in a back and forth direction will cause the hook to be released from the casing 17. As the stop 45 is provided for limiting downward forward movement of the U-shaped latching member, it can be seen that said U-shaped latching member will be held in proper position at all times when the hook 14 enters the casing 17.

Having thus described my invention, what I claim as new is:

1. A door check in combination with a door and wall comprising a casing attached to the wall, a hook attached to the door, a pivoted latching member arranged in the casing for engaging said hook when the door is swung to open position with the hook extended into the casing, a yieldable member arranged within the casing, a link connected to said yieldable member and loosely connected to said latching member, said yieldable member being adapted to be engaged by said hook upon further movement thereof into the casing for releasing the latching member from engagement with the hook.

2. A door check comprising a casing having an opening therein, a hook adapted to extend into said casing through said opening, a pivoted latching member arranged in said casing and adapted to engage said hook when extended into the casing, means for supporting said pivoted latching member in position so as to cause engagement thereof with the hook, a leaf spring having one end thereof secured to said casing, a link pivotally connected to the free end of said spring and its opposite end loosely connected to said

pivoted latching member, said spring being adapted to be engaged by said hook upon further movement thereof in the casing so as to cause disengagement of the said latching member from said hook.

3. A door check comprising a casing having an opening therein, a hook carried by the door and adapted to extend into the casing through the opening in said casing, a pivoted latching member arranged in the casing and adapted to engage said hook when said hook enters the casing, a leaf spring secured at one end to the casing, a link pivotally connected to the other end of said leaf spring, said link being connected to the latching member so as to swing the latching member on its pivot and out of engagement with the hook upon further movement of said hook into the casing so as to release the prong from said latching member.

4. A door check comprising a casing having an opening therein, a hook carried by the door and adapted to extend into the opening, a pivoted latching member arranged within the casing and adapted to engage the hook when it enters the casing, a yieldable member arranged in the casing, a link pivotally connected to said yieldable member, said link having a slot therein, a pin carried by said pivoted latching member and extending into said slot, said yieldable member being adapted to be forced rearwardly in the casing so as to cause swinging movement of said pivoted latching member upon further movement of the hook within the casing so as to release the latching member from the notch.

5. A door check comprising a casing having an opening therein, a hook adapted to extend into the opening, a pivoted latching member arranged within the casing and adapted to engage the hook when it enters the casing, a yieldable member arranged in the casing, a link pivotally connected to said yieldable member, said link having a slot therein, a pin carried by said pivoted latching member and extending into said slot, said yieldable member being adapted to be forced rearwardly in the casing so as to cause swinging movement of said pivoted latching member upon further movement of the hook within the casing so as to release the latching member from the notch in the hook, and a weight carried by said pivoted latching member for momentarily holding said pivoted latching member in either its latched or unlatched position.

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