March 24, 1942. D. P. WALLACE 2,277,283

DOOR CHECK

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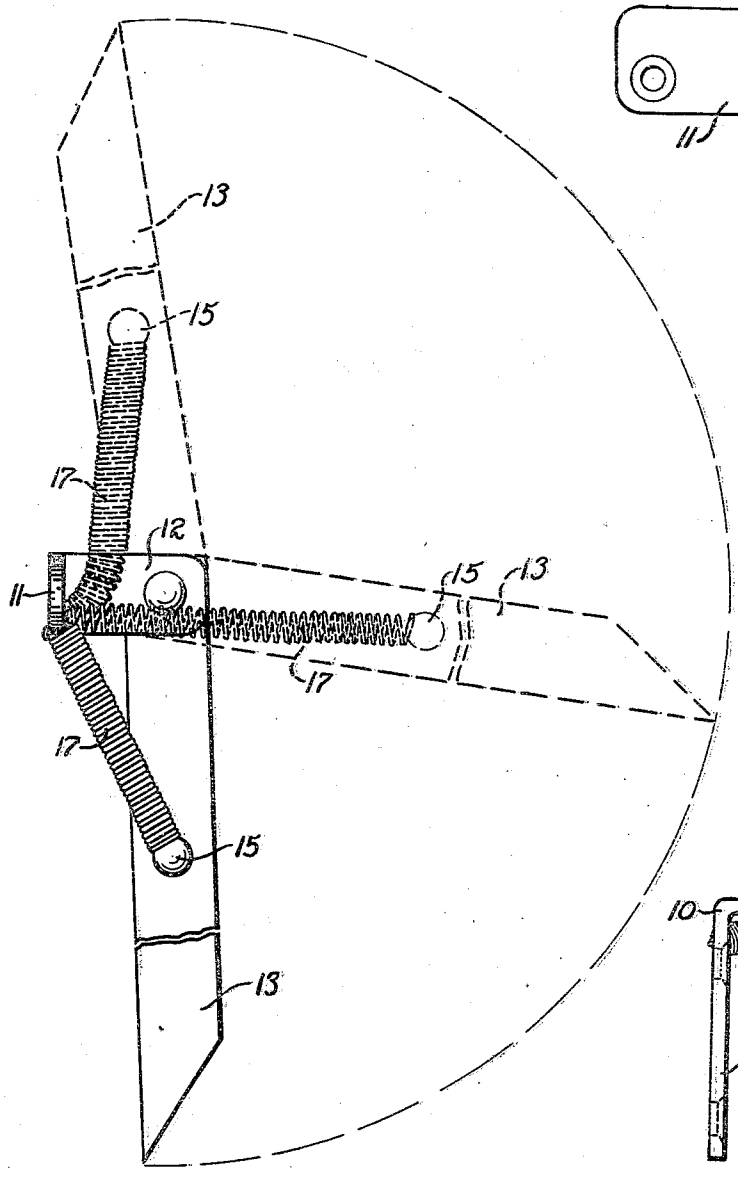


Fig. 1

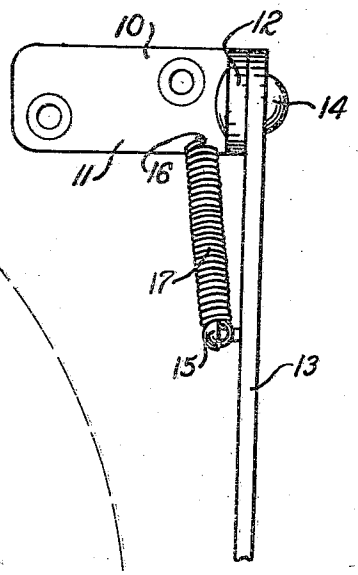


Fig. 2

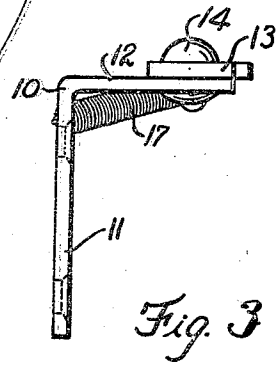


Fig. 3

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DOOR CHECK

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4 Claims. (Cl. 292—338)

This invention relates to door checks of the type intended to be employed to hold swinging doors, such as garage doors, in their open positions. A primary object of the invention is to provide an extremely simple structure that will be positive in operation and at the same time be produced at a relatively low cost.

A further primary object of the invention is to provide a door check which will have a definite limit of travel of the check bar toward the door to which it may be attached when the check is swung to the operating position, this means being inherent in the spring mounting employed for swinging the check from either side of a substantially horizontal position.

These and other objects and advantages of the invention will become apparent to those versed in the art in the following description of one particular form of the invention as illustrated in the accompanying drawing, in which

Fig. 1 is a view in side elevation of a structure embodying the invention;

Fig. 2, a view in front elevation; and

Fig. 3, a view in top plan.

Like characters of reference indicate like parts throughout the several views in the drawing.

A mounting bracket 10 is formed in any suitable shape, preferably in the simple form of an L to have a foot 11 for positioning against the door (not shown) and to have the outturned leg 12. To the leg 12 is hinged the check bar 13 by any suitable means, such as the rivet 14, the rivet 14 being passed through the inner end of the bar 13 and anchored in a fixed manner through the leg 12 whereby the check bar 13 is free to rock around the rivet 14 parallel to the outturned leg 12.

At a short distance out from the rivet 14 is located a post 15 on the check bar 13 to be fixed thereto and to extend from that side of the bar 13 on which the leg 12 is located. The foot 11 is provided with a hole 16 and a coil spring 17 at one end thereof hooked to the foot 11 through this hole 16 and the other end thereof hooked around the post 15. The length of the spring 17 when in its normal contracted condition and the spacing of the post 15 from the pivot rivet 14 are made to be such that when the check bar 13 is swung below the rivet 14, as shown in Fig. 1 by solid lines, the spring 17, by reason of its coils being in abutting contact, one with the other, serves as a very definite and fixed spacing means to limit the travel of the bar 13 to that position indicated in Fig. 1 wherein the bar 13 is held in a position spaced forwardly or outwardly from the plane of the rear face of the foot 11.

It is to be noted that in this position the upper end of the spring 17 is in firm abutment with the under side or lower edge of the foot 11 whereas the lower end of the spring 17 is firmly seated against the post 15, this post in the present form having an outer rounded head with a neck extending therefrom into the bar 13, the lower end of the spring 17 being engaged about this neck portion and the head preventing disengagement of the spring therefrom. Moreover the head on this post 15 serves very effectively as a seat against which the rounded end of the spring 17 bears.

Since the bar 13 is thus held in a position spaced forwardly of the foot 11, this position preferably being at least at a slight angle from the plane of the foot 11, there is a space between the bar 13 and the door to which its mounting bracket 10 may be engaged. Therefore the bar 13 may be operated from that position when desired, either by grasping it with the operator's fingers or by the toe of his shoe to pull the bar 13 around to some such position as indicated by the dash lines extending somewhat below the horizontal position in Fig. 1, from which position, by slight continued upward pushing on the bar 13, the spring 17 will pull the bar 13 around into the upper position.

The rivet 14 is spaced outwardly on the leg 12 a sufficient distance to allow the check bar 13 to assume an inwardly inclined position when thus pulled to the upper position so that the post 15 will then have its axis on a vertical line between the axis of the rivet 14 and the plane of the rear face of the foot 11. In that position the spring 17 will therefore maintain the check bar 13 firmly in its upper position until actually pulled around and forced down below the horizontal line passing through the center of the rivet 14. The lower end of the check bar 13 is preferably pointed as indicated in order to engage with the ground or floor onto which it may be dropped so as to prevent return travel of the door to which its mounting bracket 10 may be attached.

By reason of the limiting action of the spring 17 when the check bar 13 is in its lowermost position, regardless of how the door may be agitated, such as by wind, the check bar 13 cannot be brought around against the lower part of the door to cause disengagement of the lower end of the check bar from the ground or floor as the case may be.

While I have herein shown and described my invention in the one particular form, it is obvious that structural changes may be employed without departing from the spirit of the invention and I, therefore, do not desire to be limited to that precise form beyond the limitations as may be imposed by the following claims.

I claim :

1. A door check comprising in combination a mounting bracket having a door attachment base, a leg outturned from the base, a check bar rockably mounted on the leg to swing about a horizontally disposed axis, said axis being spaced forwardly of said base, and a coil spring normally contracted having its coils each consecutively in contact one with an adjacent coil, one end of said spring being secured to said base and the other end carried by said bar spaced from said axis, the respective ends of said spring abutting said base and said bar, said spring being of that length to serve as a stop in said contracted condition to limit downward and rearward travel of said bar to a downturned position forwardly of said base, whereby pressure exerted to rock said bar back toward said base tends to force the spring coils one against the other in a spring axial direction to form in effect a rigid column between said spring and abutments.

2. A door check comprising in combination a door mounting bracket, a check bar hingedly carried by said bracket to swing about a substantially horizontal axis forward of the rear face of the bracket, a coil spring normally defining a tubular shape with its coils in abutment one with the next throughout its length, an abutment on said bar to which said spring is secured by one end, and means securing the other end of the spring to said bracket, the respective spring ends abutting said bracket and said bar securing means in a manner whereby pressure exerted to move said bar toward the spring retracted position tends to force the spring coils together in a direction axially of the spring and whereby said spring serves as a rigid post between said bracket and said bar abutment to limit positively downward swing of said bar toward the said bracket face and permits said bar to be swung upwardly and around above said axis by yielding extension of said spring.

3. A door check comprising in combination a door mounting bracket, a check bar hingedly carried by said bracket to swing about a substantially horizontal axis forward of the rear face of the bracket, a coil spring normally defining a tubular shape with its coils in abutment one with the next throughout its length, an abutment on said bar to which said spring is secured by one end, and means securing the other end of the spring to said bracket, the respective spring ends abutting said bracket and said bar securing means in a manner whereby pressure exerted to move said bar toward the spring retracted position tends to force the spring coils together in a direction axially of the spring and whereby said spring serves as a rigid post between said bracket and said bar abutment to limit positively downward swing of said bar toward the said bracket face and permits said bar to be swung upwardly and around above said axis by yielding extension of said spring, said bar abutment carrying a seat engaging with the outer end coil of said spring at least upon contraction of the spring.

4. A door check comprising in combination a door mounting bracket, a check bar hingedly carried by said bracket to swing about a substantially horizontal axis forward of the rear face of the bracket, a coil spring normally defining a tubular shape with its coils in abutment one with the next throughout its length, an abutment on said bar to which said spring is secured by one end, and means securing the other end of the spring to said bracket, the respective spring ends abutting said bracket and said bar securing means in a manner whereby pressure exerted to move said bar toward the spring retracted position tends to force the spring coils together in a direction axially of the spring and whereby said spring serves as a rigid post between said bracket and said bar abutment to limit positively downward swing of said bar toward the said bracket face and permits said bar to be swung upwardly and around above said axis by yielding extension of said spring, said bar abutment consisting of a post extending from the bar to locate said spring in substantial parallelism with the bar.

DONALD P. WALLACE.