

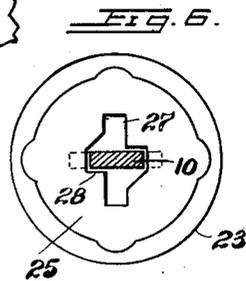
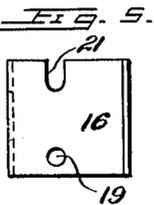
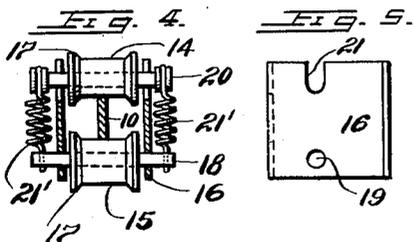
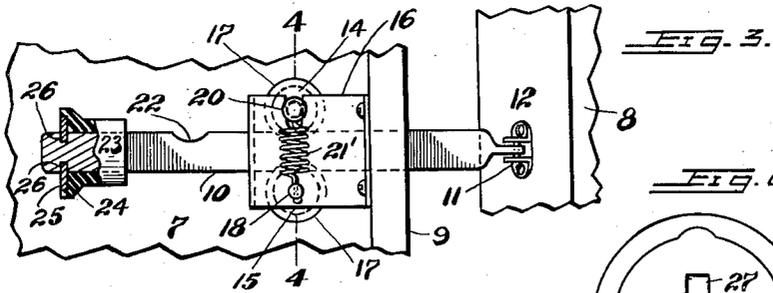
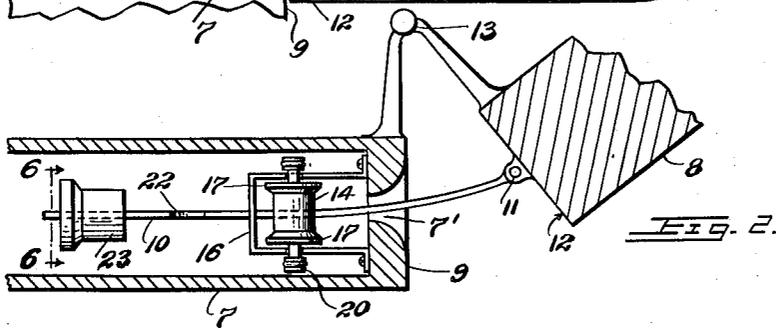
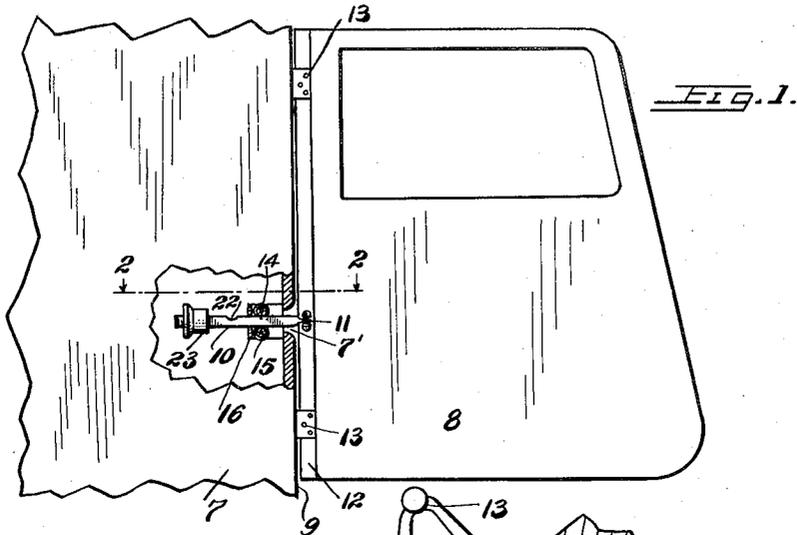
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VEHICLE DOOR CHECK

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# UNITED STATES PATENT OFFICE

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## VEHICLE DOOR CHECK

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5 Claims. (Cl. 16—86)

The invention appertains to door checks for motor cars and has for its object the provision of a check for arresting the movement of a door as it swings open so that it will be held open against any incidental tendency for it to close. This is a desirable feature, particularly for an automobile door that is hinged to swing forwardly of the vehicle in opening it since wind pressure tends to close it.

The invention also incorporates a stop or buffer for stopping the door in the event of its being forced beyond the arresting mechanism.

The invention consists of a rigid strap or bar slidably mounted between guide rollers bracketed preferably in the door jamb. The forward end of the strap is pivoted to the hinged edge of the door so as to slide in and out with the door. In the preferred construction, one of the rollers is spring-urged towards the other in order that as the door is opened the spring-pressed roller will engage in a notch or depression in the strap to check the door. Beyond the notch a rubber buffer is so located as to come into play should the door be swung violently open.

The invention presents a sturdy and serviceable door check that is inexpensive to manufacture.

Referring to the accompanying drawing, Figure 1 is an elevation of the invention shown applied to a motor car door partly open.

Figure 2 is a sectional plan along line 2—2 of Figure 1.

Figure 3 is a side elevation of the invention partly in section.

Figure 4 is a sectional view taken along line 4—4 of Figure 3.

Figure 5 is a side view of the supporting bracket for the rollers.

Figure 6 is a section taken along line 6—6 of Figure 2 showing the buffer.

Like numerals of reference indicate corresponding parts in each of the figures of the drawing.

In the drawing, the reference numeral 7 denotes the side of the jamb to which the door 8 is hinged. In motor car construction the side-wall 7 is usually hollow and it is proposed to mount the door check within this wall to conceal it. A suitable opening 7' is provided in the face 9 of the jamb through which the rigid strap or bar 10 operates.

The strap is preferably flat-sided and its forward end is pivoted at 11 to the door face 12 which is hinged at 13. The flat sides of the strap are vertically arranged and the top and bottom

edges are engaged by guide rollers 14 and 15 mounted in a U-shaped bracket 16 fastened to the jamb by suitable securing elements. Each roller has a fairly wide engaging surface to permit lateral play of the strap and is flanged at 17.

The lower roller is journaled on a shaft 18 fitted in holes 19 in the opposing sides of the bracket, whereas the upper roller is journaled on a shaft 20 lodged in slots 21 in the sides of said bracket.

On each side of the bracket is a tension coil-spring 21' connected with the shaft of the upper roller to urge it inwardly. The connections between the springs and shaft 20 may consist of hooks on the springs that are lodged in grooves on the shaft. The lower ends of the springs may be suitably connected to the shaft 18. The mode of connecting the springs in order to apply pressure on the upper roller may be modified as will be readily understood by those skilled in the art. It is also apparent that the invention need not be restricted to coil springs for applying pressure on the upper roller and hence it is not intended to confine the invention in this respect.

The strap passes through an aperture in the bracket and its upper edge has a rearwardly disposed notch or recess 22 conforming to the curvature of the upper roller. Beyond this notch is a buffer 23 consisting of a rubber block 24 snugly fitted on the strap by means of an opening and backed by a metal collar 25. The collar may be attached to the strap in any desirable manner such as by slotting the opposing edges of the strap at 26 and forming intersecting openings in the collar at right angles to each other. One of these openings is made the full width of the strap as at 27 and the other is made to correspond to the width of the slotted section of the strap as at 28. By slipping the collar over the strap and giving it a quarter turn it locks itself in the slotted part 26. The rubber block is recessed to fit over the collar and projections are supplied on the collar to preclude its turning on the strap (see Figure 6).

In operation, it will be evident that since the upper roller is pressure urged it will engage the notch 22 as the strap is withdrawn in opening the door. This sufficiently checks the door and maintains it open. It can however be readily closed again by applying sufficient pressure to release the notch from the roller. In the event that the door is swung open with sufficient force to cause the notch to pass the upper roller, the buffer will abut the bracket and absorb the shock.

What I claim is:—

1. A door check comprising a rigid strap adapted to be pivoted to the hinged face of a door, said strap having a notch removed from the pivotal connection with the door, a bracket for attachment to the jamb, a roller mounted therein and supporting the strap, and a pressure-urged element mounted in the bracket oppositely to the roller and bearing against the strap for engagement in its notch.

2. A door check comprising a rigid strap adapted to be pivoted to the hinged face of a door, said strap being horizontally extended and having its upper surface supplied with a notch removed from the pivotal connection with the door, a bracket for attachment to the jamb, a roller journalled therein and providing a support for the lower surface of the strap, and a pressure-urged element mounted in the bracket oppositely to the roller aforesaid and bearing down on the strap for engagement in its notch.

3. A door check comprising a rigid strap adapted to be pivoted to the hinged face of a door, said strap being horizontally extended and having its upper surface supplied with a notch removed from the pivotal connection with the door, a bracket for attachment to the jamb, a roller journalled therein and providing a support for the lower surface of the strap, and a pressure-urged roller loosely journalled in the bracket oppositely to the roller aforesaid and bearing down on the strap for engagement in its notch.

4. A door check comprising a rigid strap adapted to be pivoted to the hinged face of a door, said strap being horizontally extended and having its upper surface supplied with a notch removed from the pivotal connection with the door, a bracket for attachment to the jamb, a roller journalled therein and providing a support for the lower surface of the strap, and a spring-urged roller loosely journalled in the bracket oppositely to the roller aforesaid and bearing down on the strap for engagement in its notch.

5. The combination with a door hinged to a jamb, of a rigid strap pivotally attached at an end to the hinged face of the door and horizontally extending therefrom, said strap being supplied with a notch removed from the pivotal connection with the door, a U-shaped bracket attached to the jamb and supplied with an aperture through which the strap freely reciprocates in the opening and closing of the door, said bracket having opposing slots in its side portions, a shaft lodged in said slots, a roller journalled in the shaft between the sides of the bracket and in engagement with the strap, springs tensioning the shaft to cause the roller to engage in the notch of the strap, a roller supported in the bracket to support the strap against the pressure of the roller aforesaid, and a buffer carried by the free end of the strap beyond the notch.

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