March 19, 1940. H. E. MARSH 2,194,287

DOOR CHECK

Filed Aug. 6, 1938

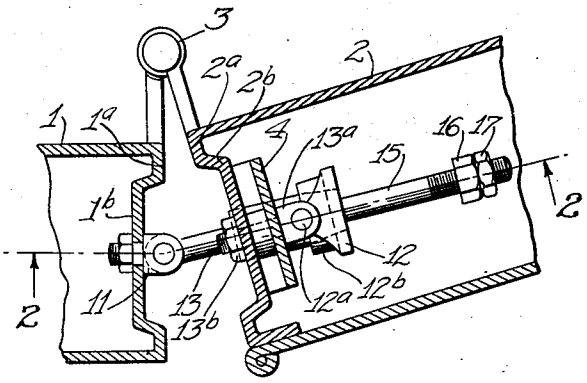


FIG. 1.

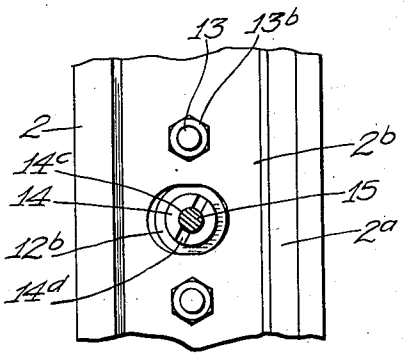


FIG. 3.

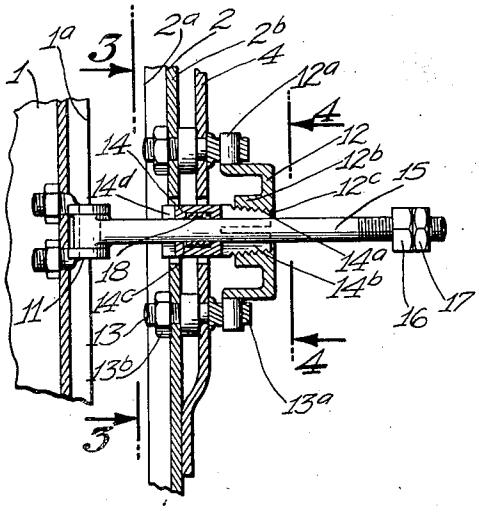


FIG. 2.

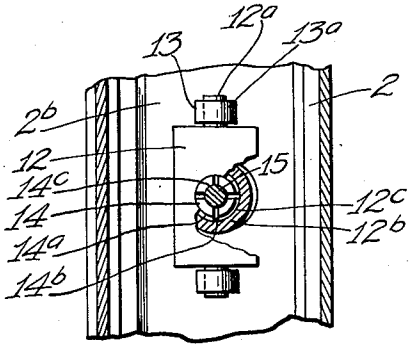


FIG. 4.

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DOOR CHECK

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3 Claims. (Cl. 16—82)

My present invention relates to a door check, particularly adapted though not limited to automobile doors.

The principal object of this invention is to provide a door check for a hinged door whereby the door may be readily swung about its hinges, but frictionally retained in any desired position against easy displacement or swinging by wind, gravity, or similar force.

Another object is to provide a very simple positive door stop in connection with the foregoing structure.

Another important object of this invention is to provide a door check of this class which is concealed except when the door is open, and then is not more visible than other door stops.

A further important object of this invention is to provide novel and readily accessible means for adjusting the amount of frictional resistance against the easy swinging or displacement of the door in either direction.

An object also of this invention is to provide novel means of lubricating and of retaining the lubrication of the sliding rod in the gripping means.

A further object of this invention is to provide a door check of this class which is simple and economical of construction, durable, and which will not readily deteriorate or get out of order, and which may be readily installed in new as well as old automobiles.

With these and other objects in view as will appear hereinafter, I have devised a door check having certain novel features of construction, as will be hereinafter described in detail and particularly set forth in the appended claims, reference being had to the accompanying drawing, and to the characters of reference thereon, which form a part of this application, in which:

Fig. 1 is a sectional view in plan, showing a preferred construction of my door check and embodiment thereof in an automobile body and door;

Fig. 2 is a fragmentary sectional elevation thereof, taken through 2—2 of Fig. 1;

Fig. 3 is a fragmentary sectional view taken from the edge of the door at 3—3 of Fig. 2; and,

Fig. 4 is a fragmentary section thereof taken at 4—4 of Fig. 2.

In the drawing the body is designated 1, and the door 2 is mounted on the body by a hinge or hinges 3. The abutting faces 1^a and 2^a of the body and door, that is, the faces which engage each other when the door is closed, are preferably relieved, as in present automobile construction. The installation of my door check, however, is not limited to the identical abutting faces shown.

On the plate or member 1^b, forming the abutting face of the body or door casing, is mounted an eye member or clevis 11 which is preferably bolted thereto.

The corresponding plate or member 2^b of the door 2 has a reinforcing plate 4. At the inner side of this plate is positioned a slide in the form of a bracket 12 which is provided at its upper and lower ends with aligned trunnions 12^a which are pivotally mounted in the bearing or eye portions 13^a of eye bolts 13, the shanks of which extend outwardly through the plates 4 and 2^b and are secured in place by nuts 13^b at the outer side of the plate 2^b. The central portion of the bracket 12 has an elongated hub 12^b which has a threaded hole 12^c tapered from the outer end. A sleeve 14 is correspondingly threaded at the end 14^a and is adjustably screwed into the threaded hole 12^c. The threaded end is longitudinally slotted, as indicated by 14^b, so that the split end is contracted as the sleeve is screwed into the hub. The sleeve is provided with an axial bore 14^c in which is slidably mounted a rod 15. The outer end of the rod 15 is pivotally connected, on a vertical axis, to the eye member or clevis 11. On the inner end of the rod is a stop consisting of nuts 16 and 17. Intermediate the ends of the sleeve 14, and immediately surrounding the bore, is a channel in which a packing or lubricating washer 18 is positioned for lubricating the rod sliding therethrough.

The outer end of the sleeve is provided with a transverse slot to facilitate the adjustment of the sleeve by screwing the same into or out of the tapered threaded hole 12^c.

As the door 2 is opened or closed, the rod 15 slides through the sleeve, the pivotal mountings of the outer end of the rod and of the slide or bracket 12 allowing free movement of the rod laterally. The portions of the plates 2^b and 4, through which the sleeve 14 extends, are horizontally elongated to permit such free movement.

To increase or reduce the resistance of the sliding of the rod 15 through the sleeve, the sleeve is adjusted into or out of the tapered threaded hole.

The stop nut 16 engages the inner side of the bracket 12 when this nut serves as stop means to limit the opening of the door.

Though I have shown and described the particular construction, I do not wish to be limited to the same, but desire to include in the scope

of my invention, the construction, combination, and arrangement substantially as set forth in the appended claims.

I claim:

1. In a door check, a door casing and a door hinged thereon, each having abutting faces, a bracket within the door and pivotally mounted on the back side of its abutting face on an axis parallel to the hinged axis of the door, a rod pivoted at one end on the casing substantially in the plane of its abuting face, and a screw contracting sleeve on the bracket, the other end portion of the rod extending slidably and frictionally through the axial portion of the sleeve, one end of the sleeve extending through the abutting face of the door, and having means at said end for longitudinally adjusting the sleeve for contracting the same.

2. In a door check, a door casing and a door hinged thereon, each having abutting faces, a friction slide on one of the former immediately behind its abutting face, a rod pivoted at one end on the abutting face of the other of the former, and a screw contracting sleeve on the slide, the other end portion of the rod extending slidably and frictionally through the axial portion of the sleeve, one end of the sleeve extending through the abutting face of the member on which the slide is mounted, the latter end of the sleeve having means for longitudinally adjusting the sleeve for contracting the same diametrically.

3. In a door check, a door casing and a door hinged thereon, each having abutting faces, a bracket within one of the former and pivotally mounted on the back side of its abutting face on an axis parallel to the hinged axis of the door, a rod pivoted at one end on the abutting face of the other of the former, and a screw contracting sleeve on the bracket, the other end portion of the rod extending slidably and frictionally through the axial portion of the sleeve, one end of the sleeve extending through the abutting face of the member on which the bracket is mounted, the latter end of the sleeve having means for longitudinally adjusting the sleeve for contracting the same diametrically.

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