



Application Date: Dec. 3, 1938. No. 35261/38.

Complete Specification Accepted: May 30, 1939.

COMPLETE SPECIFICATION

Improved Means for Holding Vehicle Doors in their Open Positions

We, WOLSELEY MOTORS LIMITED, a Company registered under the laws of Great Britain, and HERBERT DANIELS, British Subject, both of the Company's address, Drew's Lane, Ward End, Birmingham, 8, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to means for holding vehicle doors in an open position, said means being of the kind comprising a horizontal arm or rod hinged to one part, either to the vehicle body or to the door, and slidably extending through an aperture in the other part so as to be enclosed and concealed within the interior of said other part when the door is closed, the outer end of the arm or rod carrying a projecting part which, when the door is fully opened, engages and is held by a spring jaw clip located within the said interior.

In a previous proposal the end of the arm or rod has carried a pair of ball members projecting from the top and bottom of the arm and adapted to engage between two jaws of a spring clip device fixed within the interior of the door or vehicle body part, said jaws being located respectively above and below an opening through which the arm slides.

The object of the present invention is to provide a simpler means for holding the arm when the door is fully opened.

According to the invention, in means for holding vehicle doors in an open position, of the kind referred to, the outer end of the horizontal sliding and pivoted arm or rod has a projecting part extending from one side only of the arm or rod, and a spring jaw clip for engaging and holding said projecting part, is mounted in a position entirely upon one side of the aperture through which the arm or rod extends.

The arm or rod may pass through a rubber grommet or ring on a plate carrying the clip.

Figure 1 of the accompanying drawings represents a horizontal section through part of a motor vehicle door provided with means for holding it in an open position

in accordance with this invention, showing the door closed and illustrating the manner in which the door holding device is concealed from view, the dotted lines representing the door when fully opened and held in its open position.

Figure 2 represents a vertical section through part of the door when closed, with the hinged rod, shown in elevation, disengaged from the clip.

Figure 3 illustrates a sectional view on the line $x-x$, Figure 2.

Referring to the drawings, the vehicle door 1 is connected by means of a hinge 2 to the fixed pillar 3 of the vehicle, and may turn when opened about the hinge pivot into the position indicated by dotted lines in Figure 1. In order to retain the door in this open position, so that it is prevented from closing inadvertently, an automatic retaining device is provided which is concealed from view when the door 1 is closed. This retaining device consists of a hinged rod 4 which is arranged to co-operate with a spring metal clip 5, the rod being pivoted at 6 to a bracket 7 secured to the face of the fixed pillar 3, the said rod 4, which may be bent laterally towards its outer end, as shown in Figure 1, being arranged to pass into the interior of the door 1 through a large diameter transverse passage 8 formed through the frame member 9 of the said door. Fitted over the inner end of this passage 8, and fixed to the inner face of the frame member 9, is a metal plate 10, the latter being formed with a circular hole within which is fitted a rubber ring or grommet 11. The hinged rod 4 is of a circular section and is arranged to pass freely through this grommet 11 in the manner illustrated in Figure 2, the grommet effectively preventing vibration or chatter of the rod against the plate 10 when the vehicle is in motion. The clip 5 which co-operates with the rod 4 is mounted upon the plate 10 immediately above the rubber ring or grommet 11, the said clip being a U-shape in plan, as shown in Figure 1, with a pair of resilient arms or branches. The end of the hinged rod 4 which lies within the door is bent up substantially at right-angles to provide

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a short circular-section vertical portion 4^a, this vertical portion lying immediately opposite the clip 5, and being of such a diameter that it may pass between the branches of the said clip, pressing the branches outwards as it passes through the restricted portion or entrance of the clip.

The arrangement is such that when the door 1 is closed the rod 4 projects into the interior of the door, so that the vertical end 4^a of the said rod lies clear of the clip 5, in the manner illustrated in Figure 2, and as shown by full lines in Figure 1, but when the door is opened the plate 10, with the grommet 11 and clip 5, moves along the rod, until, when the door has been opened to the fullest extent provided for, the vertical portion 4^a of the rod enters between the branches of the clip 5, the said branches closing around the part 4^a as indicated by dotted lines in Figure 1. The clip 5 now holds the door 1 in its open position and prevents the same from being closed inadvertently such as by the wind, or by gravity in the event of the vehicle being upon an inclined or cambered road. A free and unrestricted entrance or exit for passengers is thus provided, and persons are prevented from getting their fingers injured by the door, such as might happen if the door were accidentally slammed. Although the door is effectively held against inadvertent closing by the co-operation of the clip and rod, it may be readily closed when required by exerting sufficient closing pressure on the door to overcome the resistance of the clip 5. The branches of the latter are then forced apart by the vertical portion 4^a of the rod, the said vertical portion moving away from the clip, and the rod 4 extending further into the interior of the door, during the closing of the latter. When the door is fully closed the rod 4 lies wholly within the latter, as shown in Figure 2, the clip 5 also being within the door, so that the holding device is then concealed from view.

The improved device is particularly suitable for use with motor vehicle bodies of the two-door-coupe type, where the

doors are particularly wide and heavy. Although it is preferred to arrange the rod to move into the interior of the door, when the latter is closed, and to mount the bracket to which the rod is hinged upon the fixed pillar, the arrangement may be reversed, if desired, the bracket being attached to the hinged edge of the door and the rod being arranged to extend through a hole in the fixed pillar so that it moves into the side of the vehicle body when the door is closed and is thus obscured from view, the bent-up end of the rod, in this arrangement, engaging a clip secured to the inside of the fixed pillar when the door is fully opened.

Having now particularly described and ascertained the nature of our said invention, and in what manner the same is to be performed, we declare that what we claim is:—

1. Means for holding a vehicle door in an open position, of the kind referred to, wherein the outer end of the horizontal sliding and pivoted arm or rod has a projecting part extending from one side only of the arm or rod, a spring jaw clip for engaging and holding said projecting part, being mounted in a position entirely upon one side of the aperture through which the arm or rod extends.

2. Means for holding a vehicle door in an open position, as claimed in claim 1, wherein the projecting part is formed upon the arm or rod by bending up its outer end into a vertical position.

3. Means for holding a vehicle door in an open position, as claimed in claim 1 or 2, wherein the arm or rod passes through a rubber grommet or ring on a plate carrying the clip, said grommet or ring surrounding an opening in the plate through which the arm or rod slides.

4. Means for holding a vehicle door in an open position, substantially as herein described with reference to the accompanying drawings.

Dated this 2nd day of December, 1938.

H. N. & W. S. SKERRETT,

24, Temple Row, Birmingham, 2, and
88—90, Chancery Lane, London, W.C.2,
Agents for Applicants.

Fig. 1.

[This Drawing is a reproduction of the Original on a reduced scale.]

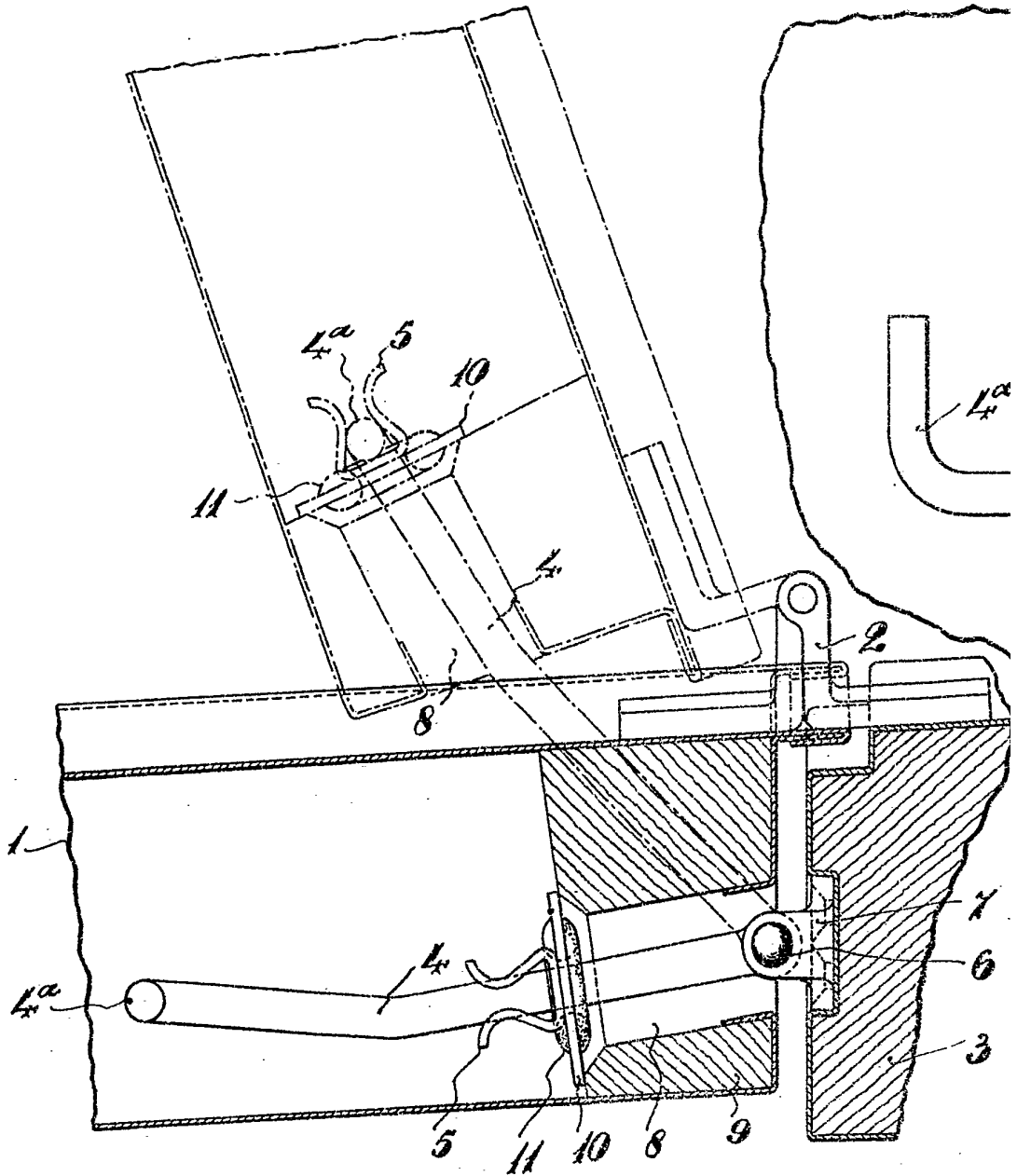


Fig. 2.

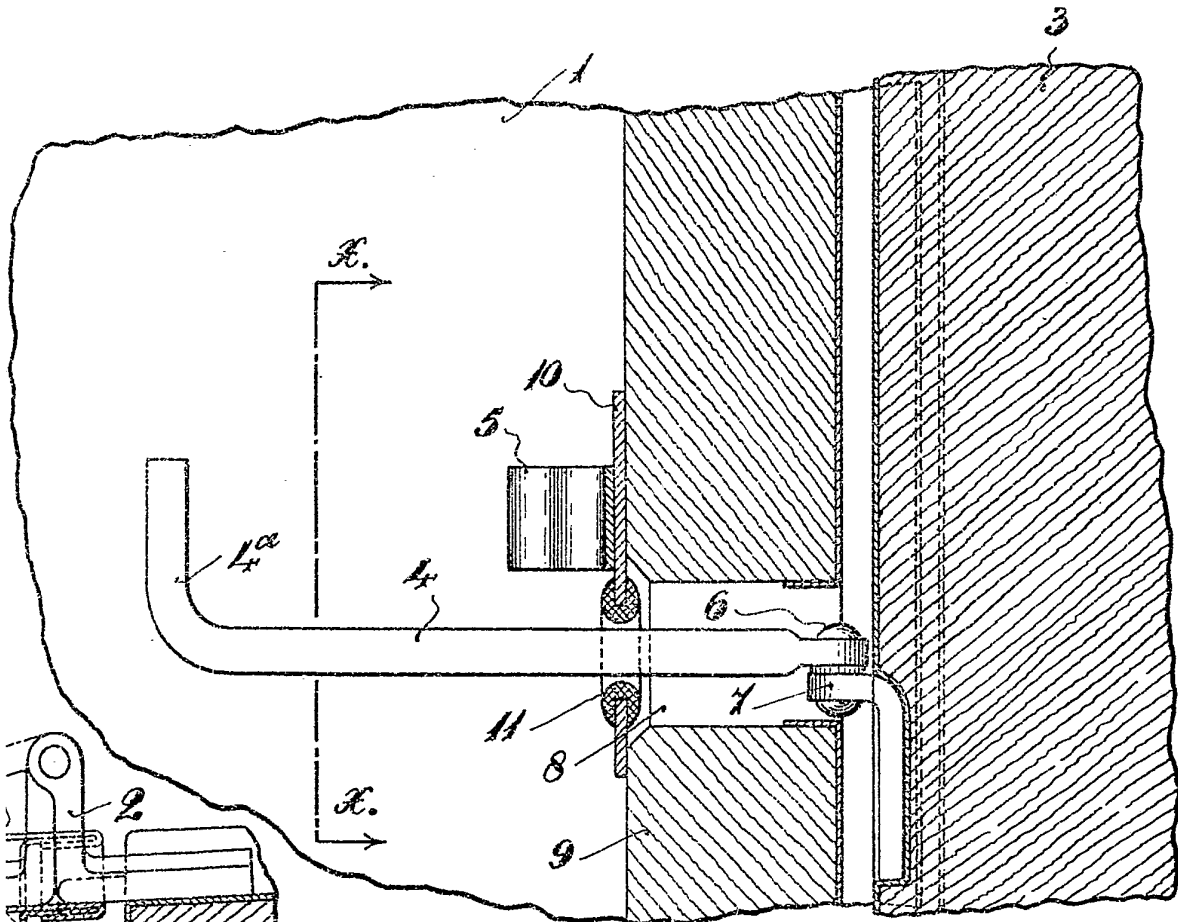


Fig. 3.

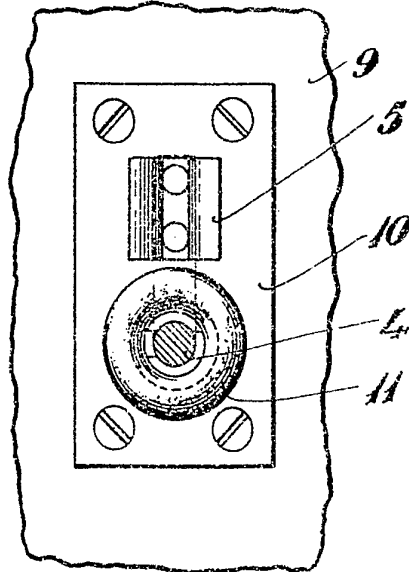
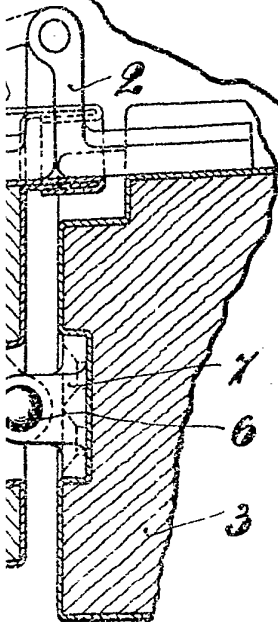


Fig. 1.

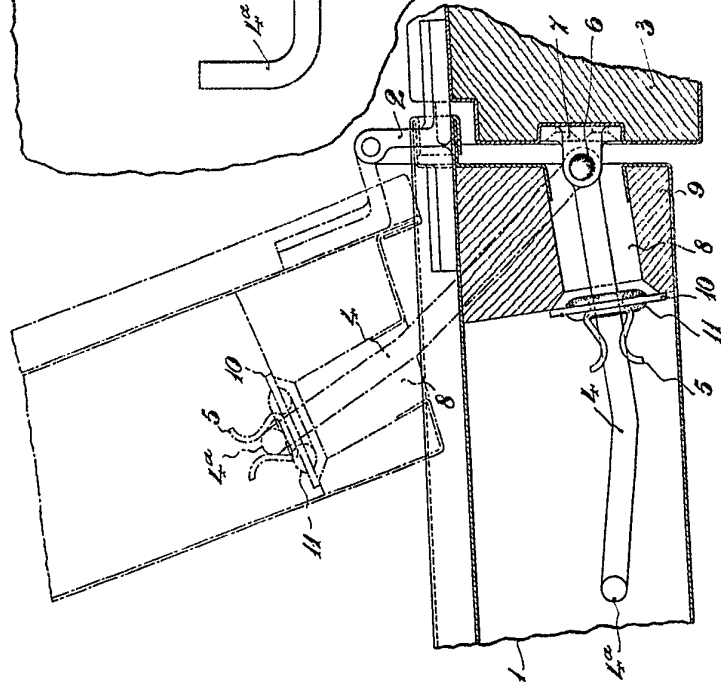


Fig. 2.

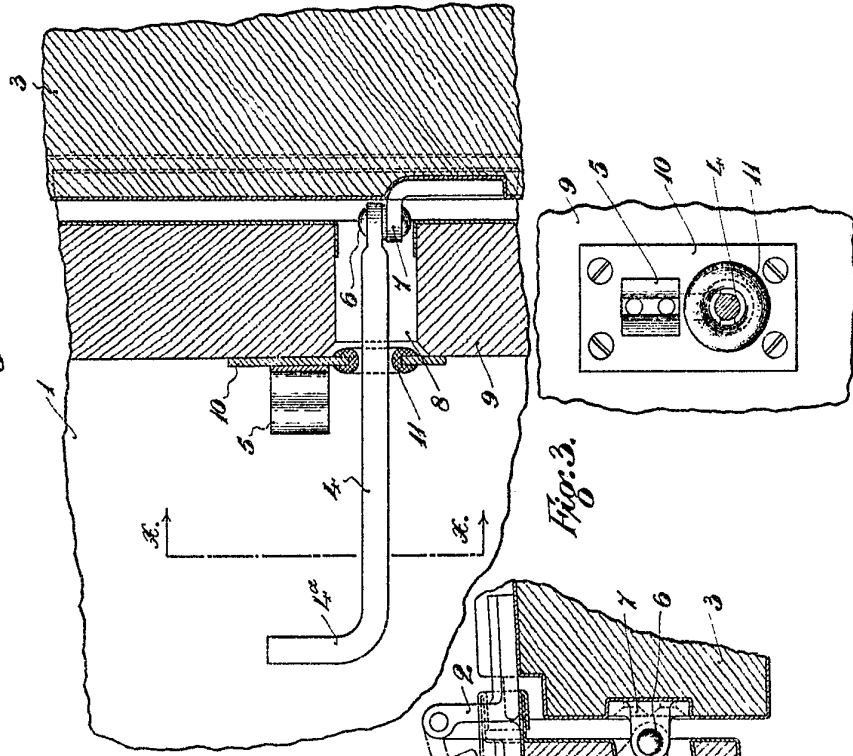


Fig. 3.

[This Drawing is a reproduction of the Original on a reduced scale.]