Feb. 16, 1943. W. N. SCHNELL 2,311,132

SAFETY DOOR CATCH

Filed Jan. 18, 1939

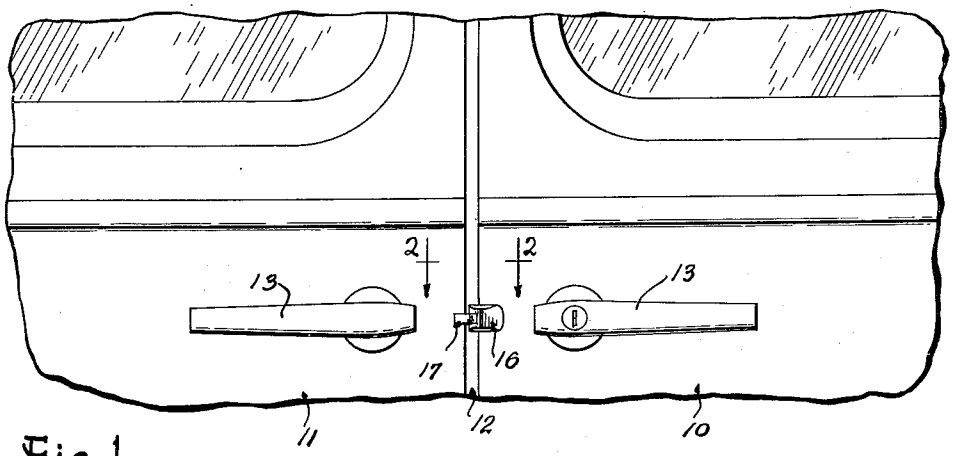


Fig. 1.

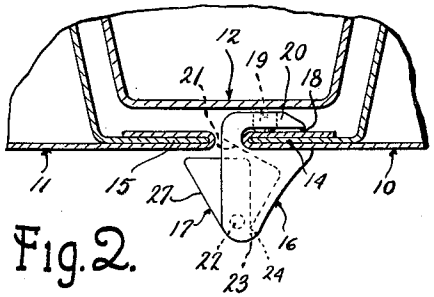


Fig. 2.

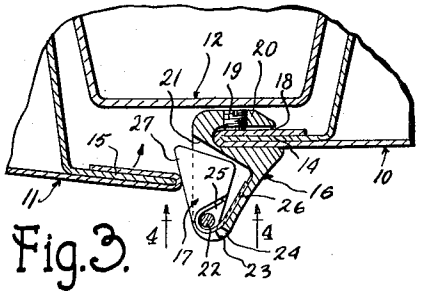


Fig. 3.

Fig. 4.

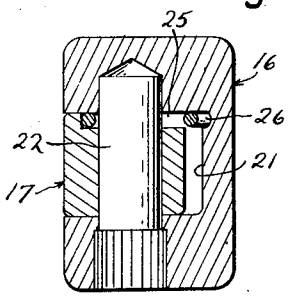


Fig. 5.

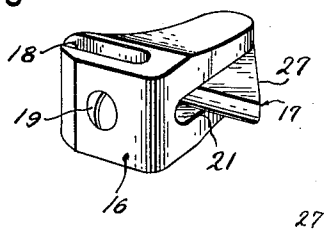
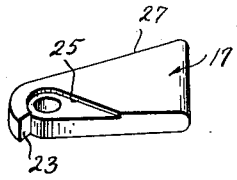


Fig. 6.



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Patented Feb. 16, 1943 2,311,132

UNITED STATES PATENT OFFICE

2,311,132

SAFETY DOOR CATCH

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Application January 18, 1939, Serial No. 251,449

7 Claims. (Cl. 292—219)

This invention relates to a safety door catch.

The device contemplated by the present invention has to do with a door catch which is to be used on four-door sedans which have two doors on each side closing to a common pillar. It is often desirable, when children are being carried as passengers in a sedan, to provide a locking means which will prevent the rear doors from being opened from the inside.

An object of the present invention is to provide a safety catch arranged to prevent the opening of the back door of a vehicle as long as the front door is closed. The catch is also adapted to permit the closing of the rear door after the front door has been closed and is so arranged that the rear door may be opened from the outside without opening the front door.

Other objects and features of the invention having to do with details of construction will be particularly brought out in the following description and claims.

In the drawing:

Fig. 1 is a fragmentary side elevation of a vehicle illustrating the safety catch in operative position.

Fig. 2 is a section taken on the lines 2—2 of Fig. 1.

Fig. 3 is a section similar to Fig. 2 showing the rear door closing with the front door already closed.

Fig. 4 is a section taken on the lines 4—4 of Fig. 3.

Fig. 5 is a rear perspective view of the catch.

Fig. 6 is a perspective view of the latch member of the catch.

Referring to the drawing, in Fig. 1 a front door of a four-door vehicle is shown at 10, a rear door at 11 and a pillar at 12. Standard handles 13 are provided on the outside of the doors. As will be seen from the sections of Figs. 2 and 3, each door is provided with vertical flanges 14 and 15, respectively, which overlap the pillar 12.

The present invention contemplates a removable stud-like member 16 which has a latch 17 pivoted therein. As shown in Figs. 2 and 3 particularly, the member 16 is roughly triangular in shape and has a notch 18 which is to receive a flange 14 of the front door. A set screw 19 serves to hold the member 16 on the flange. The stud member 16 is so dimensioned that a leg portion 20, forming one side of the notch, will lie between the flange 14 and the pillar 12 when the front door 10 is closed. The stud 16 is designed so that the flange 15 will clear the stud at all times.

As shown particularly in Fig. 3, the stud is provided with a triangular opening 21 which faces toward the rear door. Within this opening the triangularly shaped latch member 17 is provided on a pin 22. The latch member 17 is provided with a projection 23 near the pin 22 and this projection is adapted to contact a shoulder 24 on the stud 16. This limits the outward movement of the latch from the opening 21 in which it moves. A spring recess 25 is provided on one flat surface of the latch 17 near the pivot hole and a spring 26 urges the latch 17 to its outermost position, shown in Figs. 1 and 2.

When the device is fastened on the front door flange 14, as shown in Fig. 2, and both doors 10 and 11 are closed, it will be seen that the latch 17 blocks the outward movement of the flange 15 so that the rear door may not be opened as long as the front door is closed. The front door, however, is free to be opened or closed. In Fig. 3 the safety latch is shown on a closed front door and the rear door 11 is being closed against a slanting edge 27 of the latch 17. In case a person on the outside of the car desired to open the rear door without opening the front door, it would be possible to do so by pressing the latch 17 into the opening 21 far enough so that the edge of the flange 15 could pass. Other types of spring devices could, of course, be used to urge the latch 17 to its outward position without departing from the spirit of the invention. When the latch is mounted as shown in Fig. 1, between the door handles 13, it does not project away from the body beyond these handles and consequently presents a neat and ornamental appearance.

If desired a lock may be provided, on the latch member 17, to hold it within the stud member 16 except when its use is desired.

What I claim is:

1. A catch to be used on a vehicle of the type having, on either side, two doors which close to one pillar and each of which has an outside surface flange overlapping said pillar, comprising a first portion to be fastened to the flange of one door, and a second portion movable on said first portion and normally extending past the edge of the second door on the same side, whereby said second door may not be opened except when said first door is open, said second portion being movable on said first portion and arranged to cooperate with said second door whereby said second portion will be temporarily and automati-

cally shifted from its normal position when said second door is closed after the first door.

2. A catch to be used on a vehicle of the type having, on either side, two doors which close to one pillar, comprising a member to be fastened at the free edge of one of said doors, and a second member pivoted on said first member and normally extending over the free edge of the second door on the same side of the vehicle but movable to a position permitting the second door to close, and means acting on said second member to maintain the same in its normal position, but permitting said second member to be moved toward the first member to clear the second door, whereby the opening of said second door is blocked when said first door is closed, said second member being arranged to cooperate with said second door whereby said second door may be moved past said second member to closed position when said first door is closed.

3. A catch to be used on a vehicle of the type having, on either side, two doors which close to one pillar, comprising a member to be fastened at the free edge of one of said doors and shaped to clear the free edge of a second adjacent door, a second member pivoted on said first member and movable from a normal position wherein it blocks the opening of said second door, to a position wherein it clears the free edge of said second door, and means for resiliently maintaining said second member in its normal position, said second member being shaped to present a slanting latch surface to the free edge of the second door when said second door is closed after the first door and being arranged to cooperate with the free edge of the second door whereby during the closing movement of the second door, the second member will be temporarily moved from its normal blocking position.

4. In combination, a vehicle of the type having, on either side, two doors which close to one pillar, vertical flanges on said doors extending over said pillar, and a safety latch means comprising a first member to be fastened on the flange of one of said doors, a second member on said first member normally extending past the flange of the second door on the same side, whereby said second door may not be opened except when said first door is open and means for movably mounting the second member on said first member whereby the flange on the second door cooperates with the second member to move it temporarily from its normal position during the closing movement of the second door.

5. In combination, a vehicle of the type having, on either side, two doors which close to one pillar, vertical flanges on said doors extending over said pillar, and a safety latch means comprising a first member having a vertical notch to receive one of said flanges and provided with a substantially horizontal slot, a triangular latch member pivoted at one corner in said slot of the first member, means for limiting the movement of said latch out of said slot, and means for normally resiliently maintaining said latch member over the flange of a second adjacent door of said vehicle whereby the opening of said second door is blocked.

6. In a safety catch for use in connection with the overlap flanges of two adjoining doors, a body member, means fastening said body member to one overlap flange, a spring projected latch member supported in said body movable by contact with the other overlap flange when the door closes and projecting, upon the closure, in front of the said other overlap flange to prevent the same opening until the first flange is opened.

7. In a safety catch for use in connection with the overlap flanges of two adjoining doors, comprising a member that may be fastened to one overlap flange, jaws formed on said member to receive and be clamped to said overlap flange, said member supporting a spring projected latch member movable by contact with the other overlap flange when the door closes and projecting, upon the closure, in front of the said other overlap flange to prevent the same opening until the first flange is opened.

WILLIAM N. SCHNELL.