



# UNITED STATES PATENT OFFICE

2,548,115

## VEHICLE DOOR HANDLE ASSEMBLY

Clare M. MacKichan, Detroit, Mich., assignor to  
General Motors Corporation, Detroit, Mich., a  
corporation of Delaware

Application May 16, 1946, Serial No. 670,194

3 Claims. (Cl. 292-348)

1

This invention relates to a vehicle door handle assembly and more particularly to a tilting type door handle assembly.

It is the object of this invention to produce a tilting type door handle assembly which is of simple structure and which cannot be removed when the vehicle door is closed.

In the drawings:

Fig. 1 is a horizontal section through the handle assembly, vehicle door and a portion of the body pillar.

Figs. 2 and 3 are sections along the lines 2-2 and 3-3 of Fig. 1.

Referring more particularly to the drawings, there is shown a vehicle door 1 having an overlap flange 2, a door lock pillar 3. The body pillar is designated 4. The door lock bolt 5 is generally in the form of a U which projects through a suitable opening in the lock pillar 3 and is pivoted on the lock frame 6 by pins 7 and 8 so that it can swing upwardly and downwardly about a substantially horizontal axis which is substantially perpendicular to the plane of the door.

The handle assembly for retracting bolt 5 comprises a handle 9 having a shank 10 journaled upon pin 11 which is mounted in openings 12 and 13 in escutcheon 14. Pin 11 is provided with a transverse groove 15 in one end thereof. A set screw 16 having a screw fit in opening 17 in escutcheon 14 interengages pin 11 in groove 15 to lock the same in place. Screw 16 passes through an opening 18 in plate 23 and an opening 19 in the door overlap flange 2. Rollback 20 is cast or fixed within handle 9 and pivots on pin 11 in opening 31. Escutcheon 14 is provided with a recess 22 which receives handle shank 10.

Mounting plate 23 is welded or otherwise affixed to the inside face of the outer door panel and is provided with an opening 24 through which the rollback 20 operates and a pair of openings 25 through which bolts 26 pass. Bolts 26 pass through openings 27 in the base of recess 22 and securing nuts are secured on to the end of the bolt on the opposite side of plate 23.

Pin 11 is provided with a tapped bore 28 in one end which is closed by screw 29. When it is desired to remove pin 11, screw 29 is first removed and then a threaded instrument is screwed into hole 28 and the pin pulled out of escutcheon 14 and shank 10, set screw 16, of course, having first been removed. Screw 29 keeps dirt and moisture out of hole 28. Escutcheon 14 is provided with an opening 31 through which rollback 20 passes.

The handle is assembled to the door as follows: Plate 23 is first affixed within the door on the

2

inside of the outside door panel, escutcheon 14 is then secured to plate 23 by bolts 26 and nuts 28. Handle 9, with rollback 20 affixed thereto, is next assembled to escutcheon 14 by inserting shank 10 in recess 22 and passing pin 11 into openings 12 and 13 and through shank 10. While door 1 is in open position set screw 16 is now screwed into opening 17 in escutcheon 14 with the end of set screw 16 interengaging groove 15 to lock pin 11 in place. Screw 16 is accessible through opening 19 with an ordinary screwdriver. Screw 29 can be inserted in pin 11 either before or after it is assembled to escutcheon 14.

When the door is closed the tilt handle 9 cannot be removed because the door overlap flange and pillar 4 positively prevent access to screw 16 and shank 10 substantially fills recess 22 and covers the heads of bolts 26 so that they cannot be reached by any instrument from without the car. Handle 9 is tilted downwardly about pin 11 upon a substantially horizontal axis to retract latch bolt 5. The tilting of handle 9 to retract bolt 5 is shown in the dotted lines Fig. 2.

I claim:

1. A vehicle door handle assembly comprising a handle having a shank, an escutcheon having a recess adapted to receive said shank, means passing through a wall of the recessed portion of said escutcheon for securing the escutcheon to the door, means for pivoting the shank in said recess with the shank overlying said securing means whereby the shank conceals the aforesaid securing means to prevent access thereto from outside the door, said pivot means being spaced outwardly from the outer wall of the door and being accessible from the outer face of the door, and means engageable with said pivot means and accessible through a wall of said door only when the door is open for securing the pivot means in operative relation with said handle shank and escutcheon.

2. A vehicle door handle assembly comprising a handle having a shank, an attaching plate adapted to be secured to the inside face of the outer door panel, an escutcheon having a recess adapted to receive said shank, means passing through the base of said recess for securing the escutcheon to the plate, pivot means for pivotally mounting the handle shank in said recess on an axis substantially parallel to the plane of the door and over the aforesaid securing means whereby the latter are inaccessible as long as the shank is pivotally supported in said recess, said pivot means being spaced outwardly from the outer face of the door so as to be accessible

3

from the outer side of the door for disassembling said handle from said escutcheon, and means adapted to be inserted in place from the inner face of the door when the door is open for interengaging the escutcheon and said pivot means.

3. A handle assembly for a vehicle door comprising an escutcheon having a recess therein, means passing through a wall of said recess for securing the escutcheon to the door, a handle 10 having a shank fitted into said recess, said shank covering said securing means whereby the securing means is inaccessible for removal, a pin upon which said shank is journalled mounted in said escutcheon, said pin having at least one end 15 accessible for removal from the outer face of the door, and means engageable with said pin for locking said pin in said escutcheon, said last mentioned means being assembled to said es-

4

cutcheon and pin from the inside face of the door whereby the said means is inaccessible when the door is closed.

CLARE M. MACKICHAN.

## REFERENCES CITED

The following references are of record in the file of this patent:

## UNITED STATES PATENTS

Number	Name	Date
1,480,700	Soss -----	Jan. 15, 1924
1,503,281	Ottinger -----	July 29, 1924
1,800,818	Devereaux -----	Apr. 14, 1931
2,201,963	Wartian -----	May 21, 1940
2,207,568	Wild -----	July 9, 1940
2,317,700	Thompson -----	Apr. 27, 1943
2,404,845	Joachim -----	July 30, 1946
2,427,386	Claud-Mantle -----	Sept. 16, 1947