April 22, 1952 G. V. JAKEWAY 2,593,677

DOOR HANDLE MOUNTING

Filed June 23, 1951

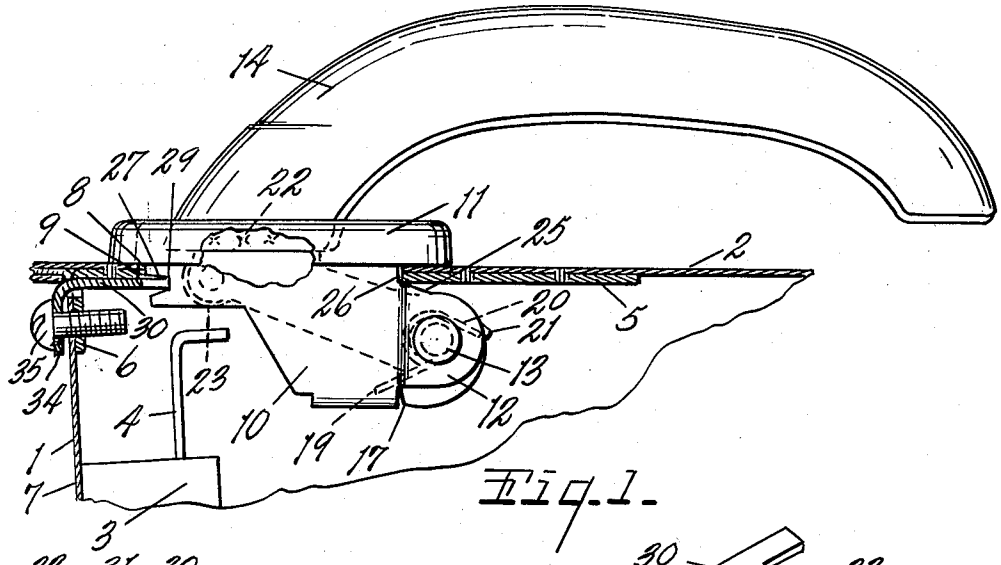


Fig. 1.

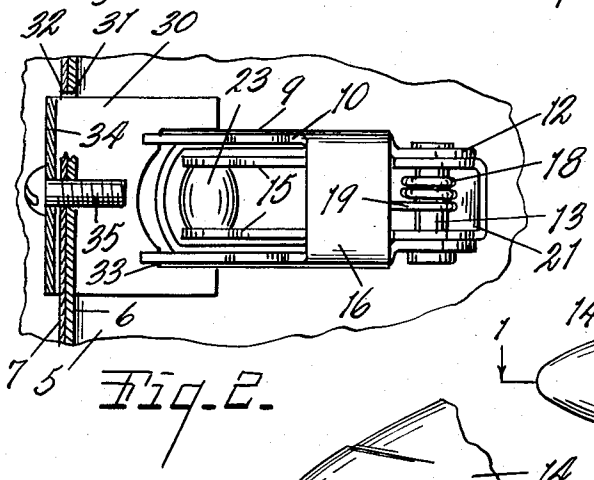


Fig. 2.

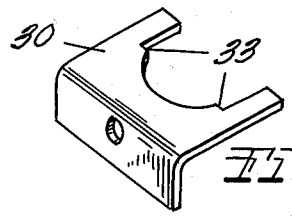


Fig. 5.

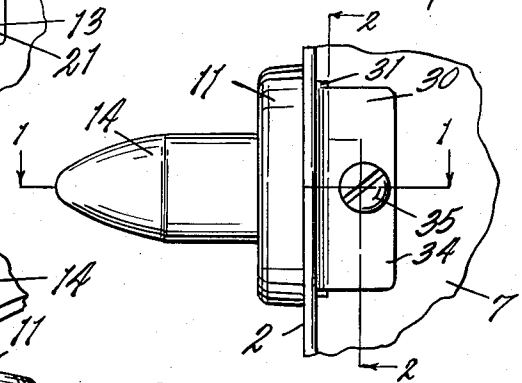


Fig. 4.

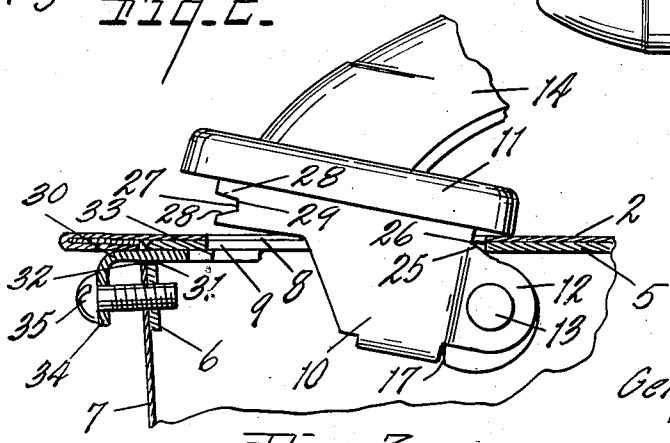


Fig. 3.

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DOOR HANDLE MOUNTING

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9 Claims. (Cl. 292—336.3)

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This invention relates to improvements in door handle mounting.

The main objects of this invention are:

First, to provide a door handle mounting for motor vehicle doors, refrigerator doors and the like in which an outward pull on the handle serves to release the latch or bolt and a structure which can be very quickly mounted upon or removed from the door by the manipulation of a single screw and is at the same time rigidly attached.

Second, to provide a structure embodying these advantages which has a wide range of adaptation.

Third, to provide a handle assembly having the above stated advantages in which the securing means are concealed and inaccessible when the door is closed.

Objects relating to details and economies of the invention will appear from the description to follow. The invention is pointed out in the claims.

A preferred embodiment of the invention is illustrated in the accompanying drawing, in which:

Fig. 1 is a side elevational view of a handle assembly embodying my invention, parts of the door and attaching means being shown in sections, and other associated parts being shown conventionally, the section being on a line corresponding to line 1—1 of Fig. 4.

Fig. 2 is a fragmentary view partially in section on a line corresponding to the broken line 2—2 of Fig. 4.

Fig. 3 is a fragmentary view partially in section in general corresponding to that of Fig. 1, illustrating steps of mounting the handle upon or removing it from the door.

Fig. 4 is a fragmentary elevational view looking from the left of Fig. 1.

Fig. 5 is a perspective view of the clamping plate element of the attaching means.

In the accompanying drawing 1 represents a door of an automobile having a chamber therein and an outer panel 2. The latch is conventionally indicated at 3 and is provided with a release member 4. The details of the latch are not illustrated as they form no part of this invention. A reinforcing and supporting plate 5 is secured on the inner side of the panel 2 and is provided with a flange 6 at its front end disposed on the inner side of the edge wall 7 of the door.

The panel 2 and the plate 5 have registering openings 8 and 9, respectively, through which the U-shaped or stirrup shaped bracket 10 carried by or forming a part of the escutcheon 11

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may be passed. The bracket 10 is dimensioned to pass through the openings in the panel and supporting plate with a tilting movement as is illustrated in Fig. 3. The bracket 10 is provided with rearwardly projecting pivot ears 12 for the pivot 13 of the handle 14. The handle 14 is disposed in an opening in the escutcheon and has inwardly and rearwardly projecting pivot arms 15 pivotally engaging the pivot 13.

The bight portion 16 of the bracket constitutes a stop with which the stop 17 on the handle pivot arms coacts to limit the inward swinging or return movement of the handle. The coil spring 18 disposed on the pivot has one arm 19 thereof in supported engagement with the bight of the bracket, the other arm 20 being in engagement with the crosspiece 21 connecting the pivoted ends of the handle pivot arms 15. The arms 15 are secured to the handle proper by welds 22. The pivot arms are provided with curved nose portions 23 adapted to coact with the latch release member 4.

The bracket 10 is provided with rearwardly inclined cams 25 which coact with the rear edge 26 of the opening in the supporting plate. At its front end the bracket 10 is provided with forwardly facing notches 27, the upper edges of which are rearwardly inclined and provide cam members 28. The bottoms of the notches 27 constitute thrust shoulders 29.

The clamping plate 30 is disposed through a slot 31 in the depending flange 6 on the supporting plate and through an aligned opening 32 in the wall 7. This clamping plate is forked to embrace the sides of the bracket and has cam engaging portions 33 which coact with the cams 28 to draw the escutcheon inwardly and with the shoulders 29 to impart rearward thrust to the escutcheon assembly thereby bringing the cams 25 into camming engagement with the rear edge of the opening in the support. This firmly draws or clamps the escutcheon upon its support and locks it in its secured position.

The clamping plate is provided with a depending flange 34 at its outer end receiving the adjusting screw 35 which is threaded into the flange 6 of the supporting plate. Thus by a simple manipulation of a single screw, the handle assembly is clamped firmly and securely to its support and may be quickly released. The screw 35 is inaccessible when the door is in closed position.

I have illustrated and described my invention in a highly practical embodiment thereof. I have not attempted to illustrate or describe other modifications or embodiments which I contemplate as it is believed that this disclosure will

enable those skilled in the art to embody or adapt my invention as may be desired.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A door handle assembly comprising a supporting plate having an opening therethrough and an inwardly projecting slotted flange in front of said opening, an escutcheon, a bracket connected to said escutcheon and projecting inwardly therefrom through said opening in said plate and having rearwardly projecting pivot ears provided with outwardly facing rearwardly inclined cams coacting with the rear edge of said opening in said plate, said bracket having forwardly facing notches in the front edges of its side members, the upper edges of the notches being rearwardly inclined and constituting cam members, a clamping plate slidably disposed through said slot in said supporting plate flange and forked to embrace the sides of said bracket and having shoulders coacting with the said cams at the front end of said bracket, an adjusting screw arranged through said flange on said clamping plate and having threaded engagement with said flange on said supporting plate for adjusting said clamping plate into retaining camming engagement with said cams on the front end of said bracket and urging said cams on said pivot ears into camming retaining engagement with the rear edge of the opening in said supporting plate, and a handle provided with inwardly projecting pivot arms disposed through said escutcheon and pivotally mounted on said pivot ears of said bracket.

2. A door handle assembly comprising a supporting plate having an opening therethrough and an inwardly projecting slotted flange in front of said opening, an escutcheon, a bracket connected to said escutcheon and projecting inwardly therefrom through said opening in said plate and having rearwardly projecting pivot ears provided with outwardly facing rearwardly inclined cams coacting with the rear edge of said opening in said plate, said bracket having rearwardly inclined cam members at its front end, a clamping plate slidably disposed through said slot in said supporting plate flange and having shoulders coacting with the said cams at the front end of said bracket, an adjusting screw arranged through said flange on said clamping plate and having threaded engagement with said flange on said supporting plate for adjusting said clamping plate into retaining camming engagement with said cams on the front end of said bracket and urging said cams on said pivot ears into camming retaining engagement with the rear edge of the opening in said supporting plate, and a handle provided with inwardly projecting pivot arms disposed through said escutcheon and pivotally mounted on said pivot ears of said bracket.

3. A door handle assembly comprising a supporting plate having an opening therethrough and an inwardly projecting slotted flange in front of said opening, an escutcheon, a U-shaped bracket connected to said escutcheon and projecting inwardly therefrom through said opening in said plate and having rearwardly projecting pivot ears provided with outwardly facing rearwardly inclined cams coacting with the rear edge of said opening in said plate, said bracket having rearwardly inclined cam members at its front end, a clamping plate slidably disposed through said slot in said supporting plate flange and having shoulders coacting with the said cams at the front end of said bracket, an adjusting screw arranged through said flange on said clamping plate and having threaded engagement with said flange on said supporting plate for adjusting said clamping plate into retaining camming engagement with said cams on the front end of said bracket and urging said cams on said pivot ears into camming retaining engagement with the rear edge of the opening in said supporting plate, a handle provided with inwardly projecting pivot arms disposed through said escutcheon and pivotally mounted on said pivot ears of said bracket, said handle arms being provided with a stop, the bight of said bracket constituting a coacting stop for limiting the return movement of the handle, and a coiled spring arranged on the handle pivot to coact with the bracket and handle pivot arms to retract the handle, the handle pivot arms being provided at their front ends with a latch engaging portion.

4. A door handle comprising a support having an opening therethrough, an escutcheon, a bracket connected to said escutcheon to project through said opening in said support and having a rearwardly inclined cam coacting with the rear edge of the opening in said support, said bracket having a rearwardly inclined cam at its front end terminating in a forwardly facing shoulder, a clamp member slidably mounted on said support and coacting with said cam and said shoulder at the front end of said bracket, and adjusting screw for said clamp member having threaded engagement with said support for adjusting said clamp member into camming engagement with said cam and thrust engagement with said shoulder at the front end of said bracket for urging said cam at the rear of said bracket into camming retaining engagement with the rear edge of the opening in said support, and a handle pivotally mounted on said bracket.

5. A door handle comprising a support having an opening therethrough, an escutcheon, a bracket connected to said escutcheon to project through said opening in said support and having a rearwardly inclined cam coacting with the rear edge of the opening in said support, said bracket having a rearwardly inclined cam at its front end, a clamp member slidably mounted on said support and coacting with said cam at the front end of said bracket, an adjusting screw for said clamp member having threaded engagement with said support for adjusting said clamp member into camming engagement with said cam and thrust engagement with said bracket for urging said cam at the rear of said bracket into camming retaining engagement with the rear edge of the opening in said support, and a handle pivotally mounted on said bracket.

6. A door handle comprising a support having an opening therethrough, an escutcheon, a bracket connected to said escutcheon to project through said opening in said support and having a rearwardly inclined cam coacting with the rear edge of the opening in said support, said bracket having a rearwardly inclined cam at its front end, a clamp member slidably mounted on said support and coacting with said cam at the front end of said bracket, an adjusting screw for said clamp member having threaded engagement with said support for adjusting said clamp member into camming engagement with said cam and thrust engagement with said bracket for urging said cam at the rear of said bracket into camming retaining engagement with the

rear edge of the opening in said support, a handle pivotally mounted on said bracket, said handle and bracket being provided with coacting stops limiting return movement of the handle, and a spring operatively associated with said bracket and handle to retract said handle.

7. A door handle comprising in combination a support and an escutcheon, the escutcheon being provided with front and rear cam members disposed on the inner side of the support when the escutcheon is in position thereon, a clamping member adjustably mounted on said support for adjustment relative to said escutcheon and to coact with the front cam member for camming engagement therewith and longitudinal thrust engagement with the escutcheon for urging the rear cam member thereof into camming engagement with the support member, manually adjustable actuating means for said clamp member, and a handle carried by said escutcheon.

8. A door handle comprising in combination a support and an escutcheon, the escutcheon being disposed on the outer side of the support and provided with cam members disposed on the inner side of the support when the handle is positioned thereon, the cam members being inclined in the same direction, a clamping member mounted on said support for adjustment relative

to said escutcheon to cammingly coact with one of said cam members and having thrust engagement with said escutcheon for bringing its other cam member into camming engagement with the support member, manually adjustable means for said clamping member, and a handle carried by said escutcheon.

9. A door handle assembly comprising a handle supporting bracket provided with an escutcheon, the bracket being provided with front and rear rearwardly inclined cam members, a clamping member mounted for adjustment relative to said bracket to coact with the front cam member for camming engagement therewith and having longitudinal thrust engagement with the bracket for urging the rear cam member thereof into engagement with a support member on which the bracket is mounted, and a handle pivotally mounted on said bracket.

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REFERENCES CITED

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

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Number	Name	Date
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