Dec. 7, 1943. B. S. FLORADAY 2,336,082

VEHICLE WINDOW REGULATOR HANDLE

Original Filed July 30, 1941

Fig. 1

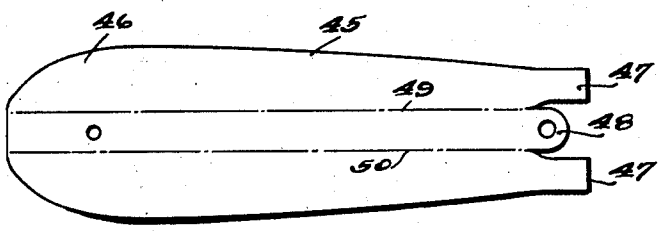


Fig. 2

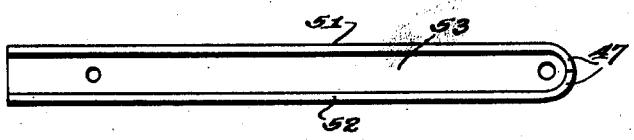
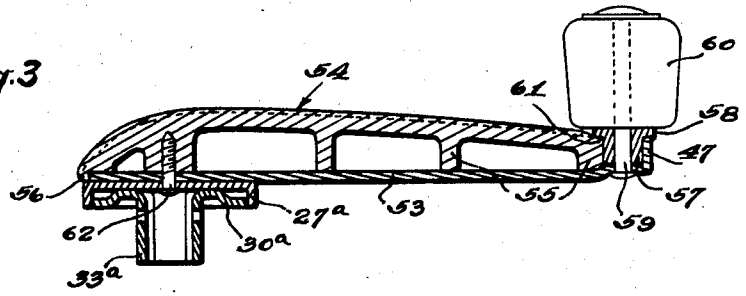


Fig. 3



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VEHICLE WINDOW REGULATOR HANDLE

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3 Claims. (Cl. 74—545)

This invention relates to handles for use in connection with vehicle doors but more particularly to handles of this character employing ornamental strips or devices, such, for example, as a handle, the body of which is metal and an ornamental portion of which is a plastic.

An object is to produce a vehicle door handle such, for example, as used for the operation of window regulators, which is sturdy in construction, easy to assemble, part of which may be produced from sheet metal stampings and another portion of which may be of plastics or other material for ornamental purposes, the same having the new and improved features of construction and arrangement hereinafter described.

For purposes of illustration but not of limitation, an embodiment of the invention is shown on the accompanying drawing in which

Figure 1 is a plan view of a blank employed in forming the body of the regulator handle;

Figure 2 is a top plan view of the body of the regulator handle formed from the blank shown in Figure 1; and

Figure 3 is a longitudinal sectional elevation of the completed regulator handle with the ornamental strip and operating knob therefor secured in position of use.

The illustrated embodiment of the invention comprises a regulator handle which is mounted on the inside of a vehicle door such as an automobile door for manually operating the regulator mechanism to raise and lower the window glass. The sheet metal blank **45** from which the handle body is formed is shown on Figure 1, from which it will be observed that one end portion indicated at **46** is enlarged and from that end the blank gradually tapers. At the opposite end is a pair of flap extensions **47**, between which is disposed a rounded bottom wall projection **48** which is slightly shorter than the flap extensions **47**. The sides of the blank **46** are folded or bent along the dot and dash lines **49** and **50** thereby to provide side walls **51** and **52** and a bottom wall **53**. The end flaps **47** are bent or folded about the rounded end wall portion **48** into abutting relation to form a rounded end wall, as indicated on Figure 2. As shown in Figure 3, the wall projection **48** is slightly embossed upwardly. Secured, as by welding, to the inner end of the bottom wall **53** or at the end remote from the flaps **47** is a flange cup **27***a* into which fits a disc **30***a* which is formed with the shaft engaging sleeve or socket member **33***a* for engaging the regulator operating shaft.

It will be observed that the disc **30***a* has an extruded tube **33***a* which is substantially square in cross section to fit over the usual operating shaft of the window regulator mechanism, as will be readily understood by those skilled in the art. As shown, holes formed in the side of the socket portion **33***a* are adapted to receive pins or screws for connecting the handle to the regulator shaft. Preferably the disc **30***a* and cup **27***a* are spot welded to produce in effect a unitary structure.

It will be apparent that between the walls **51** and **52** is a channel which receives an ornamental strip **54** preferably of plastic material such as "Bakelite," "Tenite" or the like. The plastic strip **54** is formed with a series of legs or webs **55** which are spaced longitudinally of the strip and abut against the bottom wall **53** of the handle body. The outer surface of the strip **54** corresponds to the contour of the outer or free edges of the walls **51** and **52** so as to lie approximately flush therewith. The inner end of the strip indicated at **56** slightly overlaps the adjacent end of the bottom wall **53** and abuts against the adjacent portion of the cup **27***a* substantially as shown on Figure 3.

On the free end of the handle body is a bushing **57** which abuts against the inner side of the embossed portion of the handle body and the outer end portion is formed with an annular flange **58** which overlaps the free edge of the flap portions **47**. A rivet **59** passes through the bottom wall **53**, bushing **58** and a knob **60** which rests against the flange portion **58** of the bushing, the knob providing an operating knob for the handle.

An important feature of this form of the invention resides in the manner in which the ornamental strip **54** is retained in position. It will be observed that the outer end portion of the strip **54** has an extension **61** which is first inserted beneath the flange **58** of the bushing so that the flange **58** holds the strip **54** from lateral movement away from the wall **53** of the handle body. Obviously the bushing **57** prevents longitudinal movement of the strip in one direction. The opposite end portion of the ornamental strip **54** is retained by a screw **62** which passes through aligned openings in the cup **27***a* and bottom wall **53** and into the adjacent web of the strip **54**. Thus the screw **62** retains the inner end portion of the strip in position. In this manner, it will be observed that the outer end of the ornamental strip **54** is retained in place without the use of separate fasteners, the shoulder formed on the bushing **57** being sufficient to retain the strip in the desired position and a single fastener at the opposite end portion of the strip is all that is

necessary for the purpose. Obviously this arrangement greatly facilitates assembly and materially reduces the cost of manufacture and assembly.

This application constitutes a division of my co-pending application Serial No. 404,605, filed July 30, 1941, and entitled "Handle for vehicle doors and method of making same."

While I have shown and described one embodiment of my invention which satisfies the object primarily set forth, it is to be understood that changes in details of construction, arrangement and choice of materials may be effected without departing from the spirit of the invention especially as defined in the appended claims.

What I claim is:

1. In a handle of the class described, a sheet metal body portion, said body having upstanding side walls arranged in spaced parallel relation, a bottom wall, a plastic ornamental strip having its top portion substantially flush with the free edges of said side walls, webs depending from said strip and abutting against said bottom wall, means for securing said strip to said body portion, said securing means including a flanged bushing at one end of said body portion with a portion of the flange overlying the adjacent portion of said strip, a fastener at the opposite end of said body portion connected to said strip, and means rigid with one end of said bottom wall providing a shaft engaging socket.

2. In a handle of the class described, a sheet metal body portion, said body having upstanding side walls arranged in spaced parallel relation, a bottom wall, an ornamental strip having its top portion substantially flush with the free edges of said side walls, webs depending from said strip and abutting against said bottom wall, a flanged bushing at one end of said body portion with a portion of the flange overlying the adjacent portion of the strip, an operating knob on said bushing, a pin passing through said bottom wall, bushing and knob, a disc abutting against the under side of said bottom wall at the opposite end thereof, a second disc abutting said first disc and having a rigid shaft engaging sleeve projecting therefrom, and a fastener insertable through said sleeve and passing through both discs and bottom wall and into said strip.

3. In a handle of the class described, a sheet metal body portion, said body having upstanding side walls arranged in spaced parallel relation, a bottom wall, a plastic ornamental strip substantially filling the space between said upstanding side walls in the region of the free edges thereof, means for securing said strip to said body portion, said securing means including a flanged bushing at one end of said body portion with a portion of the flange overlying the adjacent portion of said strip, a fastener at the opposite end of said body portion connected to said strip, and means rigid with one end of said bottom wall providing a shaft engaging socket.

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