Aug. 18, 1942. F. C. RUPPEL 2,293,630

DOOR AND REMOTE CONTROL HANDLE

Filed Sept. 9, 1940

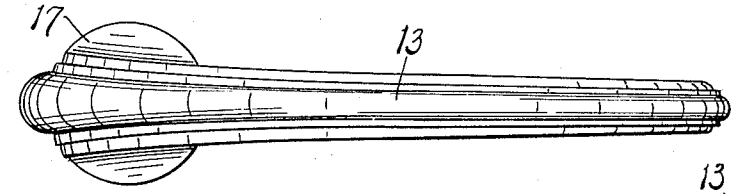


Fig. 1

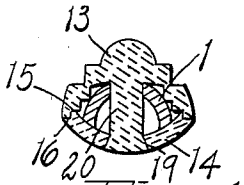


Fig. 4

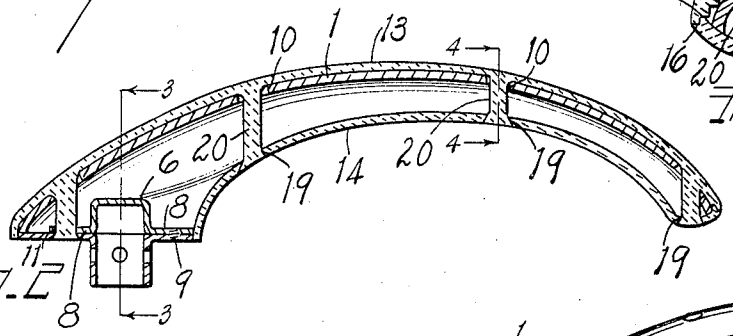


Fig. 2

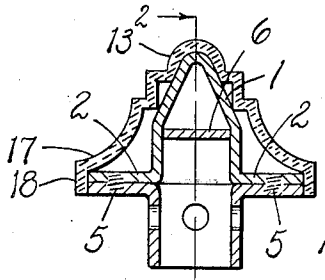


Fig. 3

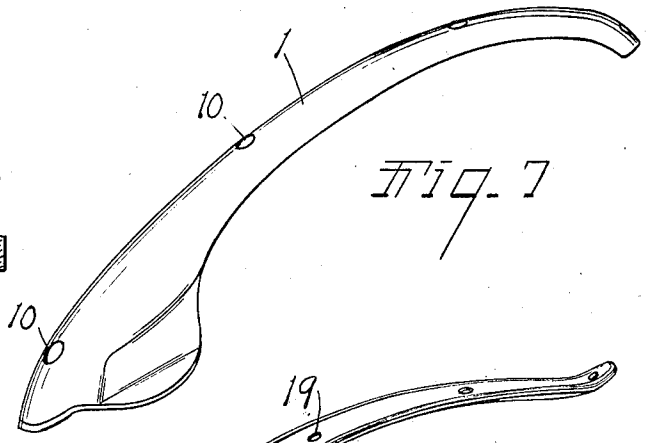


Fig. 7

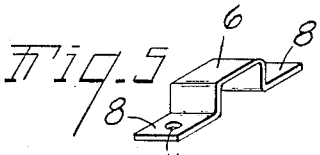


Fig. 5

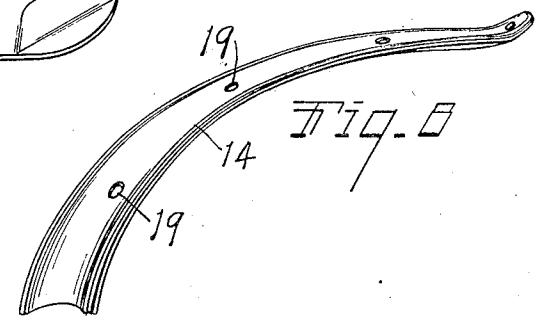


Fig. 8

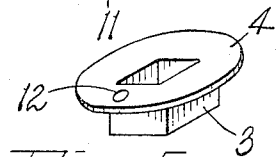


Fig. 6

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DOOR AND REMOTE CONTROL HANDLE

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Application September 9, 1940, Serial No. 356,023

5 Claims. (Cl. 292—347)

This invention relates to improvements in door and remote control handles.

The main objects of this invention are:

First, to provide a handle for doors such as automobile doors, remote control handles, doors and windows, or the like, in which the external parts may be formed of plastic material, such, for example, as "Tenite," which may be made very attractive in appearance and at the same time has the required strength.

Second, to provide a handle structure of the type described which is capable of very wide variation.

Third, to provide a handle structure having these advantages which may be produced quite economically.

Further objects and advantages pertaining to details and economies of construction and operation will appear from the description to follow. The invention is defined in the claims. A preferred embodiment of my invention is illustrated in the accompanying drawing, in which:

Fig. 1 is a front elevation of a door handle embodying the features of my invention.

Fig. 2 is a longitudinal section on line 2—2 of Fig. 3.

Fig. 3 is an enlarged transverse section on line 3—3 of Fig. 2.

Fig. 4 is an enlarged transverse section on line 4—4 of Fig. 2.

Figs. 5 and 6 are perspective views of the spindle socket members.

Fig. 7 is a perspective view of the handle bar of the embodiment illustrated.

Fig. 8 is a perspective view of the rear casing or sheath member.

I have illustrated my invention as embodied by me in a door handle for automobiles and the like. My improved door handle in the embodiment illustrated comprises a handle bar 1 which is formed as a sheet metal stamping and is suitably curved longitudinally and of curved channel cross section. This handle bar is provided with laterally projecting flanges 2 at its inner end, not only providing an effective base, but also attaching means for the spindle socket.

The spindle socket 3 is provided with an annular flange 4 at its inner end which is secured to the flanges 2 as by spot welding, indicated at 5 in Fig. 3. The bridge-like socket member 6 is disposed within the channel of the handle bar 1 and is provided with flanges 8 which are secured to the flange 4 of the socket member by welding as indicated at 9 (Fig. 2). The handle bar has longitudinally spaced centrally disposed holes 10 therein, one of these holes at the inner end of the handle bar being alined with holes 11 and 12 in the bridge piece and flange 4 of the socket member.

I provide a shell or casing consisting of the main or facing casing member 13 and the back plate or backing member 14 shaped to complement each other. The member 13 is of channel cross section transversely curved to substantially fit throughout the major portion of its length the handle bar 1 and to embrace and enclose the same. These members 13 and 14 are formed of plastic material, such for example as "Tenite," although it will be understood that there are various plastic compositions that may be used, but I especially mention "Tenite" as it is easily workable and has the qualities of durability and a very wide range of colors. It may be molded to desired shapes.

This casing member 13 is preferably provided with rabbeted edges 15 while the backing member 14 has correspondingly rabbeted edges 16. The member 13 is provided with flared portions 17 which have rearwardly turned flanges 18 which telescopingly embrace the spindle socket flange and the laterally projecting flanges 2 of the handle bar. Member 14 has countersunk holes 19 therein aligned with the holes 10 of the handle bar while the hole at the inner end of the handle bar is alined with the holes 11 and 12 of the socket members, see Fig. 2.

In assembling, the socket members are secured to the handle bar and the suitably shaped casing or sheath members 13 and 14 are assembled on the handle bar embracing and enclosing the same. The casing member 13 is provided with rivet-like portions 20 formed integrally therewith and these are inserted through the alined holes in the parts as described, and upset in the holes in the backing member and the hole in the socket member, this upsetting preferably being effected by heat and pressure.

The joint between the members 13 and 14 is not discernible, or when discernible is very inconspicuous. The completed handle has the appearance of a one piece structure so far as the exposed parts are concerned. They are secured together in a very effective manner.

I have illustrated and described one embodiment of my invention which I consider very practical. I have not attempted to illustrate or describe certain other embodiments or adaptations which I contemplate as it is believed that this disclosure will enable those skilled in the art to

embody or adapt my improvements as may be desired.

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

1. In a handle, the combination of a longitudinally curved handle bar of transversely curved channel section and having laterally projecting base extensions at its inner end, a spindle socket member provided at its inner end with a flange which is secured to the said base extensions, said handle bar having longitudinally spaced holes disposed centrally therein and said socket member flange having a hole alined with one of the holes of said handle bar, a casing member formed of plastic material, said casing member being of channel section having rabbeted edges and longitudinally curved to embracingly fit said handle bar and having telescoping engagement with said handle bar base extensions and said socket member flange, and a transversely curved backing member formed of plastic material, said backing member being longitudinally curved to correspond to the edges of said casing member and having rabbeted edges fitting the rabbeted edges thereof, said backing member being provided with holes alined with holes in said handle bar and said casing member being provided with integral rivet-like projections disposed through said holes in said handle bar and said backing member and upset therein constituting securing means for the parts, one of said rivet-like projections being disposed through a hole in said handle bar and said hole in said socket flange and upset therein.

2. In a handle, the combination of a longitudinally curved handle bar of transversely curved channel section and having laterally projecting base extensions at its inner end, a spindle socket member provided at its inner end with a flange which is secured to the said base extensions, said handle bar having longitudinally spaced holes disposed centrally therein and said socket member flange having a hole alined with one of the holes of said handle bar, a casing member formed of plastic material, said casing member being of channel section and longitudinally curved to embracingly fit said handle bar and having telescoping engagement with said handle bar base extensions and said socket member flange, and a backing member formed of plastic material, said backing member being conformed to correspond to the edges of said casing member, said backing member being provided with holes alined with holes in said handle bar and said casing member being provided with integral rivet-like projections disposed through said holes in said handle bar and said backing member and upset therein constituting securing means for the parts, one of said rivet-like projections being disposed through a hole in said handle bar and said hole in said socket flange and upset therein.

3. In a handle, the combination of a handle bar having laterally projecting flange portions at its inner end, a spindle socket member provided at its inner end with a flange which is secured to the said handle bar flanges, said handle bar having longitudinally spaced holes therein and said socket member flange having a hole alined with one of the holes of said handle bar, a casing member formed of plastic material and being of channel section receiving said handle bar and having telescoping engagement with said flange portions thereof, a backing member formed of plastic material, longitudinally curved to correspond to the edges of said casing member, said backing member being provided with holes alined with holes in said handle bar and said casing member being provided with integral rivet-like projections disposed through said holes in said handle bar and said backing member and upset therein and constituting securing means for the parts, one of said rivet-like projections being disposed through a hole in said handle bar and said hole in said socket flange and upset therein.

4. In a handle of the type described the combination of a reinforcing bar having spindle attaching means thereon and provided with apertures therethrough, an outer channel-like casing member of plastic material applied to the outer side of said bar in substantial reenforcing engagement therewith and overlapping the sides thereof, said casing member constituting the outer exposed surface of the handle, and an inner backing member of plastic material conformed to the outline of said bar and casing member and provided with openings in alinement with the apertures in said bar, said casing member having integral projecting rivet-like portions extending through said apertures and openings and upset in the latter on the inner side of the handle, whereby to hold the said members and bar in assembled relation, said reinforcing bar being encased substantially in its entirety in said members and said spindle attaching means being rigidly connected to the bar adjacent one end thereof and exposed to and accessible from the exterior of the handle for the reception of a spindle.

5. In a handle of the type described the combination of a reinforcing bar having spindle attaching means thereon, an outer channel-like casing member of plastic material applied to the outer side of said bar in substantial reenforcing engagement therewith and overlapping the sides thereof, said casing member constituting the outer exposed surface of the handle, and an inner backing member of plastic material conformed to the outline of said casing member and provided with openings therein, said casing member having integral projecting rivet-like portions extending through said openings and upset in the latter on the inner side of the handle, whereby to hold the said members and bar in assembled relation, said reinforcing bar being encased substantially in its entirety in said members and said spindle attaching means being rigidly connected to the bar adjacent one end thereof and exposed to and accessible from the exterior of the handle for the reception of a spindle.

FREDERICK C. RUPPEL.