Jan. 31, 1956 D. P. CLAYTON 2,733,336

FASTENING DEVICE

Filed Oct. 22, 1949

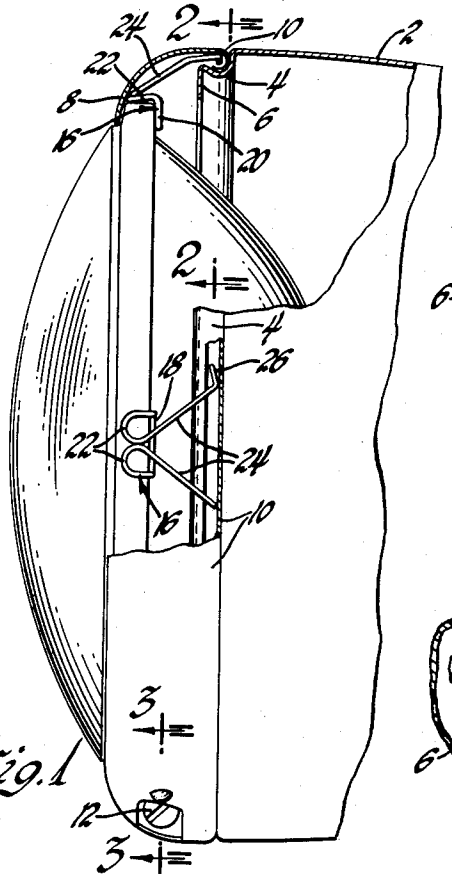


Fig. 1

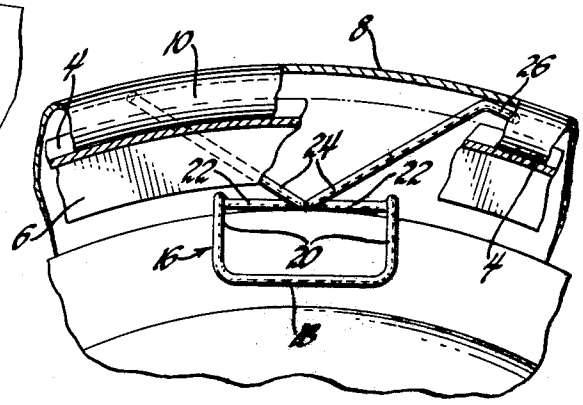


Fig. 2

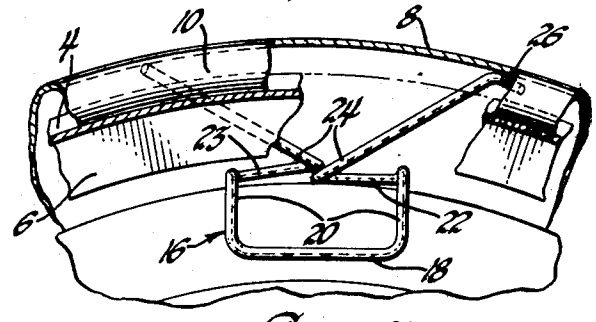


Fig. 5

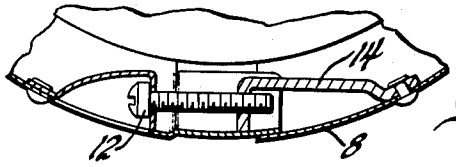


Fig. 3

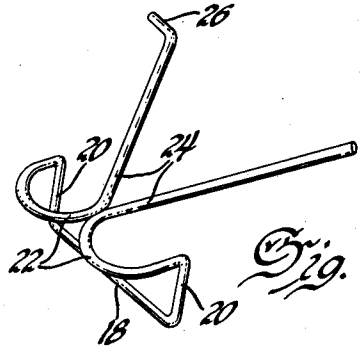


Fig. 4

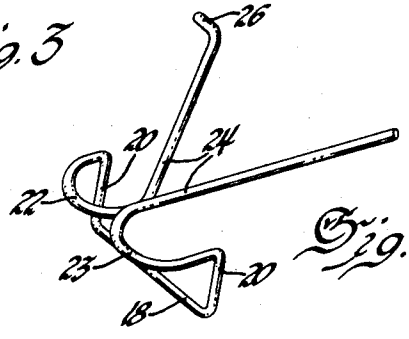


Fig. 6

Inventor

D. Paul Clayton

By

Willits, Helwig & Baillio

Attorneys

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FASTENING DEVICE

David P. Clayton, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

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3 Claims. (Cl. 240—41.5)

The present invention relates to headlamp mounting devices and more particularly to fastening devices for securing a lamp structure comprising a reflector source of light and lens sealed as a unit and commonly known as the sealed beam lamp in such devices.

Heretofore unitary lamp structures such as the sealed beam lamp have been secured in the door frame of headlamp mounting devices by means of a spring clip comprising a head shaped to the contour of the sealing flange of the sealed beam lamp and having legs extending angularly outwardly from the head of the fastener to engage an inturned edge of the door frame. By the simple expedient of a plurality of spring clips of this type the unitary lamp structure has been demountably secured in the door frame. In using such spring fastenings, however, it has been found that where the ends of the legs of the fastener were spaced too far apart the fastener would not be suitable for use in securing lamp units in door frames of varying circumference. It has been found in this connection that in securing such lamp units in door frames of substantially small diameter the ends of the legs of the fastener were spread to such an extent that the flange gripping head of the fastener would slip off the sealing flange of the unit and hence were not satisfactory.

Accordingly, it is the object of the present invention to provide a spring fastener for securing unitary lamps in the door frames of headlamp mounting devices which is capable of universal use in door frames of varying diameters.

This and other objects are attained in accordance with the present invention by providing a fastening device formed of a resilient material which is shaped to provide a right angular head for engaging one edge of the sealing flange of the unit lamp comprising a generally U-shaped portion with laterally and inwardly extending loops having extending therefrom angularly spaced legs. By the provision of inwardly extending loops in the fastening structure adjacent the head it has been found that the distance between the ends of the fastener may be considerably shortened and accordingly the fastener is adapted to be used in door frames of considerably varying diameters.

For a better understanding of the invention, reference may be had to the accompanying drawing in which Figure 1 is a side elevational view of a headlamp mounting device with a unitary lamp secured therein by fasteners embodying the present invention; Figure 2 is an enlarged view taken along the line 2—2 of Figure 1; Figure 3 is a view taken along the line 3—3 of Figure 1; Figure 4 is a perspective view of one form of the invention; Figure 5 is a view similar to Figure 2 illustrating a modification of the invention; and Figure 6 is a perspective view of the modification.

Referring now to the drawing there is illustrated a headlamp mounting device comprising a generally cup-shaped member 2 which may be a metal stamping or formed integrally with a vehicle fender having an inturned annular recess 4 terminating in an inturned flange

6 and a door frame 8 having an inturned edge 10. The door frame 8 is formed as a split ring clamp and is provided with the inturned edge 10 for engaging the annular recess 4 to clamp the door frame to the cup-shaped member. The door frame is demountably secured on the cup-shaped member by a screw threaded fastener 12 which is slidably mounted in one end of the split ring door frame and threadedly engages a threaded aperture formed in a metal stamping 14 in the adjacent end of the split ring door frame.

A unitary lamp comprising a reflector, light source and lens sealed as a unit and commonly known as a sealed beam lamp is mounted in the door frame by fasteners 16 comprisng a head portion 18 having laterally extending leg portions 20 terminating in laterally and inwardly extending semi-circular loops 22 forming what may be considered a yoke for gripping the flange of a unitary lamp structure. Extending from the yoke or more specifically the semi-circular loops 22 are the angularly spaced ends or legs 24 which engage the inturned edge of the door frame. To facilitate removal of the fastener from the inturned edge of the door frame, one of the legs 24 is provided with a laterally extending portion 26. In securing the unitary lamp in the door frame the lamp unit is placed in the door frame aperture for engagement of the inner edge of the door frame with the annular clamping ring of the unitary lamp. A plurality of fasteners such as the above described are then placed with the right angular head portion in engagement with the edge of the annular clamping ring and the ends or legs of the fastener are secured in the inturned edge of the door frame. With a plurality of this type of fastener spaced about the door frame the unitary lamp may be removably secured in the door frame as a sub-assembly and thereafter mounted on the cup-shaped member to complete the headlamp assembly.

The modification illustrated in Figures 5 and 6 is substantially the same as the fastening device illustrated in Figures 1, 2 and 4 except that the looped sections 22 and 23 respectively of the fastener are formed to pass over each other thereby permitting a shortening of the distance between the terminal ends of the fastener structure.

A fastener of the type described hereinabove is particularly adapted for universal use in securing lamp units in door frames of varying diameters.

While the embodiments of the present invention disclosed herein constitute a preferred form it is to be understood that other forms might be adapted all coming within the scope of the claims which follow:

What I claim as new and desire to secure by Letters Patent of the United States is:

1. In combination, a lamp mounting device door frame having an in-turned edge and an aperture for receiving the lens of a unitary lamp, a unitary lamp including a reflector, lens and light source sealed with an annular flange, said lamp being positioned in said aperture, and a wire spring fastening device for securing said lamp in said door frame comprising a generally U-shaped portion engaging said flange, laterally and inwardly bent semi-circular loops extending from said U-shaped portion forming a yoke for gripping the peripheral edge of said flange, and a pair of legs extending divergently from said loops and in engagement with the in-turned edge of said door frame.

2. In combination, a lamp mounting device door frame having an in-turned edge and an aperture for receiving the lens of a unitary lamp, a unitary lamp including a reflector, lens and light source sealed with an annular flange, said lamp being positioned in said aperture, and a wire spring fastening device for securing said lamp in said door frame comprising a generally U-shaped portion

engaging said flange, laterally and inwardly bent semi-circular overlapping loops extending from said U-shaped portion forming a yoke for gripping the peripheral edge of said flange, and a pair of legs extending divergently from said loops and in engagement with the in-turned edge of said door frame.

3. In combination, a lamp mounting device door frame having an in-turned edge and an aperture for receiving the lens of a unitary lamp, a unitary lamp including a reflector, lens and light source sealed with an annular flange, said lamp being positioned in said aperture, and a wire spring fastening device for securing said lamp in said door frame comprising a generally U-shaped portion engaging said flange, laterally and inwardly bent semi-circular loops extending from said U-shaped portion forming a yoke for gripping the peripheral edge of said flange, and a pair of legs extending divergently from said loops and in engagement with the in-turned edge of said door frame, one of said legs having a laterally extending terminal end.

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