April 17, 1956 G. E. BENYA 2,742,249

RETAINER CLIP

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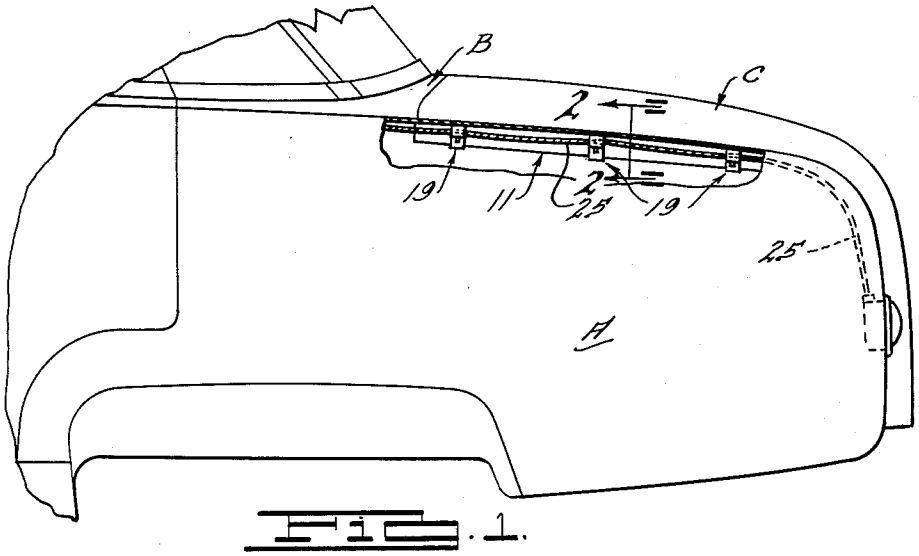


FIG. 1.

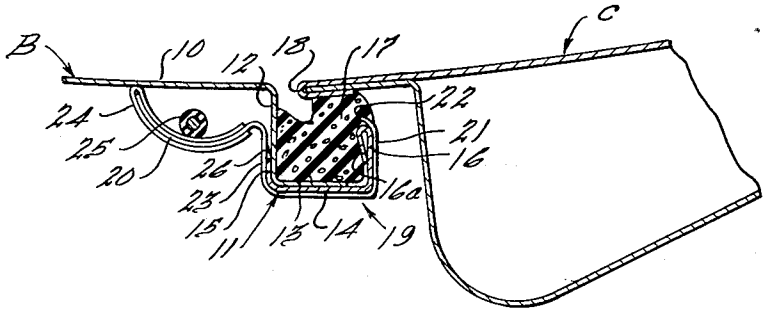


FIG. 2.

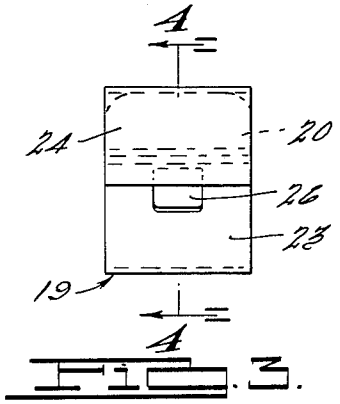


FIG. 3.

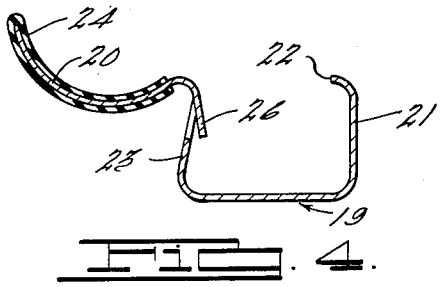


FIG. 4.

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RETAINER CLIP

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1 Claim. (Cl. 248—65)

This invention relates to retainer devices or clips useful in automobile body construction for supporting electrical conduits or wires, an object of the invention being to provide an improved snap-on clip or retainer having a portion which may be readily applied to a channel or trough of the body and also having a laterally projecting portion adapted to extend into position beneath a panel member of the body to support an electrical conduit or wire leading, for example, to the tail lamp of the automobile.

In automobile body construction it is common to provide a rear deck having an opening therein leading to a luggage compartment and closed by a rear deck lid hinged to the body. The edge of the deck panel along the opening is provided with a depending or downwardly offset channel or trough opening upwardly and carrying a compressible weather seal adapted to be engaged by an overlap flange of the deck lid when the latter is closed.

In accordance with the embodiment of the invention herein illustrated the retainer device or clip is constructed so that it may be mounted upon the above mentioned channel or trough extending along the edge of the luggage compartment opening, the electrical conduit supporting portion of the device or clip extending laterally from the trough so as to support the electrical conduit at the side of the trough remote from the luggage compartment opening. In the present embodiment the retainer device or clip comprises a U-shaped or upwardly opening channel portion adapted to embrace the channel or trough of the body and to be snapped into supported position from the underside thereof. The channel portion of the clip is formed with a base and spaced upwardly extending inner and outer side walls. The upper edge of the inner side wall is preferably offset to hook over the adjacent edge of the channel or trough of the body. The outer side wall terminates at its upper edge in a laterally projecting arm portion which for convenience may be termed a harness arm and which is preferably somewhat concaved or dished so as to form a trough to receive and support the electrical conduit and hold it in position. This projecting harness arm portion thus forms the retainer for the electrical conduit, and in the present embodiment it preferably extends laterally and upwardly so as to contact the underside of the body panel at one side of the luggage compartment opening. The outer side wall of the retainer clip, according to the illustrated embodiment, has a resilient or yieldable tongue or projection lanced out of the metal thereof which, when the clip is snapped into place, will snap over and engage the upper exposed edge of a channel member forming part of the trough of the body, thus firmly retaining the clip in assembled position on the trough.

By the foregoing structure the resilient retainer device or clip is readily snapped into supported engagement with the channel or trough of the body at any desired location along the latter and is positively interlocked therewith by virtue of the inter-engagement between the juxtaposed channel sides of the trough and clip. A plurality of

similar clips may be readily applied at locations spaced longitudinally of the trough so as to support electrical conduits out of the way and close to the underside of the rear deck. Assembly and installation of the electrical conduits are thus simplified, reducing costs and avoiding the necessity of securing the conduit supporting devices to interior body panels by welding or screw attachments.

The major portion of the harness arm extending from the upper edge of the outer wall of the clip remote from the deck opening is preferably spaced below the body panel so as to support the electrical conduit freely, and terminates in an upturned end spaced from the body trough and resiliently engageable with the underside of the deck or body panel. Thus, the electrical conduits may be readily strung between the harness arm and the deck panel intermediate the upturned end of the harness arm and the trough of the body, or the harness arm may be sprung away from the underside of the deck panel to permit assembly or removal of the conduits. In this latter regard both the harness arm and the aforesaid lanced projection extend from the upper end of the same side or wall of the clip. In consequence, upon springing the harness arm downward or away from the deck panel, the clip will not become disengaged from the trough or channel of the body by reason of the engagement of the lanced projection with the edge member extending along the outer wall of the trough.

Other objects of this invention will appear in the following description and appended claims, reference being had to the accompanying drawings forming a part of this specification wherein like reference characters designate corresponding parts in the several views.

Fig. 1 is a fragmentary side view of the rear portion of an automobile body, portions being broken away to illustrate the location and mounting of the retainer clips.

Fig. 2 is a fragmentary vertical sectional view taken in the direction of the arrows along the line 2—2 of Fig. 1.

Fig. 3 is a side view of the retainer or harness clip detached from the automobile body.

Fig. 4 is a vertical section taken in the direction of the arrows along the line 4—4 of Fig. 3.

It is to be understood that the invention is not limited in its application to the details of construction and arrangement of parts illustrated in the accompanying drawings, since the invention is capable of other embodiments and of being practiced or carried out in various ways. Also it is to be understood that the phraseology or terminology employed herein is for the purpose of description and not of limitation.

Referring to the drawings, the rear end portion of an automobile body is shown, including the left rear fender A, rear deck B, and rear deck lid C which is hinged to the body in accordance with conventional practice to close the usual opening in the rear deck leading to the vehicle luggage compartment. The edge of the rear deck panel 10 adjacent the rear deck opening is customarily reinforced by means of a channel or trough, as indicated generally by the numeral 11 in Fig. 1. The deck panel 10 may comprise an inward extension of the adjacent fender A. In the present instance, the rear deck panel 10 terminates inward adjacent the rear deck opening in a depending flange 12, which in turn terminates in an inbent flange portion 13 having the inner edge thereof flanged upwardly to complete a flange unit of L-section extending along the edge of the deck opening.

The channel or trough 11 is completed in the present instance by an upward opening channel member 14 having its base closely underlying the flange 13 and extending longitudinally thereof. The outer wall 15 of the member 14 is disposed adjacent the outer surface of the flange

12 and terminates along an upper edge in a supporting ledge or shoulder intermediate the panel 10 and flange 13. The juxtaposed portions 12, 15 and 13, 14 are suitably secured together as by welding. The inner wall 16 of the member 14 is provided with a flange portion 16a which is folded toward the wall 15 and back against the wall 16 to provide a rounded double thickness upper edge extending longitudinally of the member 14 and overchanging the base of the latter.

By virtue of the two-piece channel or trough 11, comprising the flanges 12, 13 and channel member 14, a superior reinforcement is achieved along the edge of the deck opening. A compressible weather-seal strip 17, preferably of rubber, is confined within the channel of the trough 11, partially by virtue of the folded upper edge of the channel wall 16, and is adapted to be compressed by the overlap flange 18 of the rear deck lid C, when the latter is closed, to form a weather tight seal therewith.

The retainer clip, which is cooperable with the channel or trough 11, comprises an upwardly opening channel or U-shaped portion 19 having a base and spaced inner and outer upright walls 21 and 23, respectively. Extended laterally and outwardly from the upper edge of the wall 23 is an arm portion or harness arm 20 which is preferably concaved or bowed. This arm portion, as shown in Fig. 4, is scurved outwardly and upwardly. The upper edge of the inner wall 22 of the clip is offset inwardly at 22 to provide a hook-like portion. The foregoing parts of the retainer clip are integrally formed from a a single metal blank. If desired the arm portion 20 may be covered with a layer or shield of rubber or other insulating material which may be vulcanized thereto. In the assembled condition of the retainer clip the inner wall 21 of the clip extends in juxtaposition to the wall 16 of the trough and the upper hook-like edge 22 thereof overlies the upper folded edge of the wall 16. The outer wall 23 of the clip also extends in juxtaposition to the outer wall 15 of the trough.

As indicated in Figs. 3 and 4, the walls 21 and 23 converge upwardly toward each other in their untensioned condition so as to enable them to grip the trough walls 15 and 16 firmly when the clip is assembled. Lanced from the wall 23 so as to extend angularly downward from the upper end thereof adjacent the juncture with the arm 20 is a projection or tongue 26. The latter extends toward the flange 12, when the clip is assembled, and terminates in an edge overlying and engaging the shoulder provided by the upper edge of the channel wall 15, Fig. 2.

By virtue of the resiliency of the retainer clip it is apparent that the channel portion 19 of the clip may be readily sprung into position so as to install the same on the trough 11 from below the latter, as shown in Fig. 2, and may be readily disengaged therefrom by springing the clip sides or walls apart. When installing the retainer clip the walls 21, 23 will be sprung apart as the clip is forced upwardly over the trough 11, and when the clip snaps into position the offset portion 22 will hook over the upper edge of the wall 16. During this operation the tongue 26 will yield and snap into position against the edge of the wall 15. By suitably employing a number of similar clips spaced along the trough 11, the electrical conduit or wire 25 extending longitudinally of the trough 11 is conveniently retained at an out-of-the-way location adjacent the underside of the deck panel 10. If desired the conduit 25 may be strung through the openings between the panel 10 and harness arm 20 after the latter are assembled, or the latter may be sprung away from the panel 10 to permit passage of the conduit 25 to and from the mounted position of Fig. 2.

I claim:

A retainer clip for an electrical conduit adapted to be supported along an offset trough provided along an edge of a vehicle body panel, comprising a channel portion adapted to embrace said trough and having a base and spaced side walls, one of said walls terminating in an inturned edge projecting in the direction of the second wall and adapted to overlie an edge of said trough, said latter wall terminating in a curved arm projecting in a direction entirely laterally and outwardly of said channel portion, said curved arm forming a trough to receive the conduit at a locality spaced laterally of said first named trough and opening in the direction of opening of said channel portion, said second wall having an inturned projection inclined toward the base of said channel portion and disposed below the outer portion of said second named trough.

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