Feb. 27, 1951 H. G. ANDERSON 2,543,540

BATTERY TERMINAL CONNECTOR

Filed Nov. 28, 1947

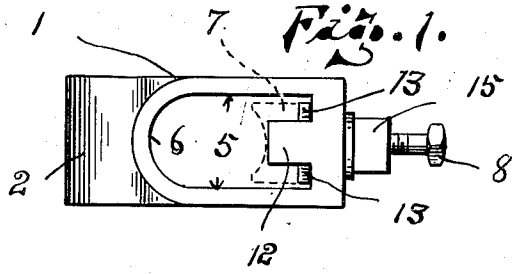


Fig. 1.

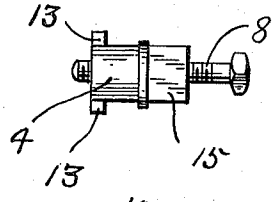


Fig. 2.

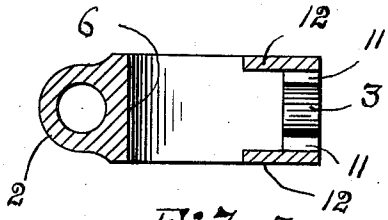


Fig. 3.

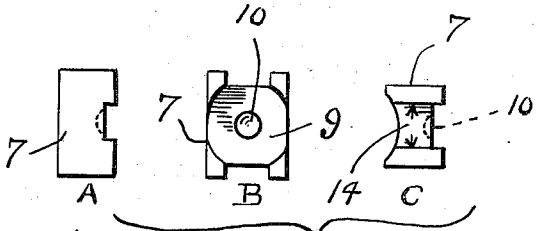


Fig. 4.

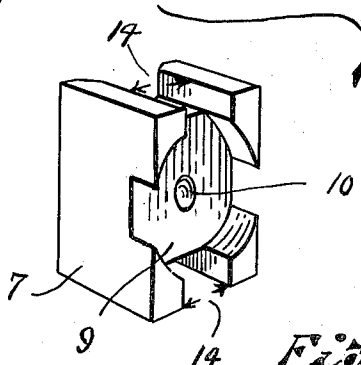


Fig. 5.

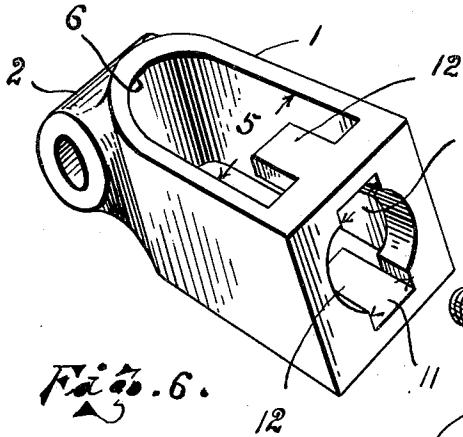


Fig. 6.

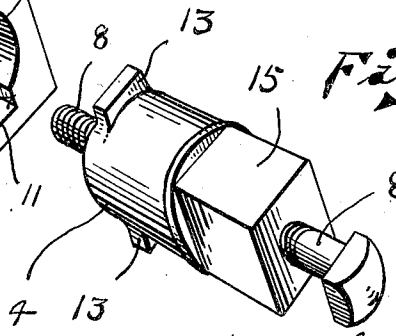


Fig. 7.

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BATTERY TERMINAL CONNECTOR

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3 Claims. (Cl. 173—259)

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This invention relates to an improved adapter particularly for use in connecting an electric cable to a battery terminal such as used in automobiles and the like.

The annoyance associated more particularly with the freeing of the common cable clamp or connector from a battery terminal is well known and which necessitates the initial unscrewing of some part of the connection which invariably is awkward to accomplish.

Thus one of the principal objects of the instant invention is to minimize such annoyance.

Another object is to simplify both the application and removal of such a device.

Still another object is to provide such an applicator having parts conveniently cooperative with other removable parts for special or particular association with the battery terminal.

A still further object is to provide a combination of parts that are easy of construction and that do not require special fitting or machining of parts except as to the proper and common fitting of the clamping screw.

Further objects and advantages will appear as the description of the invention proceeds.

Referring to the accompanying drawing forming part of this application:

Fig. 1 is a top plan view of one of the completely assembled adapters embodying the invention.

Fig. 2 is a similar view of the removable locking bolt and clamping screw.

Fig. 3 is a vertical central sectional view of the housing alone shown in Fig. 1.

Fig. 4 is a side, back, and top plan view, A, B, and C respectively, of the auxiliary clamping shoe.

Fig. 5 is an enlarged perspective view of the auxiliary clamping shoe towards the back thereof.

Fig. 6 is an enlarged perspective view of the adapter housing only.

Fig. 7 is a similar view of the locking bolt.

In the drawing 1 represents the hollow main body portion or housing of the adapter which is somewhat elongated and generally rectangular in cross section and has formed integral therewith at one end the transverse elongated cable receiving sleeve 2 and at its opposite flat end is provided with a marginally stepped central bore 3 for optional reception of the oppositely bayonetted locking bolt 4.

The main central through opening 5 of the housing is preferably of general U-shape, concaved as at 6 at one end, and stepped though generally flat at the opposite or bolt receiving end.

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The concaved portion 6 is for the better contact when placed about a common battery terminal which is usually cylindrical and for a like reason there is provided the auxiliary clamping nut-like shoe 7, the use of which is, obviously, optional, but deemed novel in that its being directly coactive with the clamping bolt or screw 8 as well as the housing of the adapter.

This coactive relation of the shoe 7 with both the clamping and locking bolts occurs by virtue of its being provided in the center of its back wall portion 9 with the bolt receiving recess 10 to permit automatic seating and adjustment of the shoe when forced to place by engagement of the end of the clamping bolt 8 when forcing same against a battery terminal post.

For quick adjusting accommodation of the locking bolt 4 the inner approximate half thereof is made cylindrical in form to neatly fit within the marginally stepped portion of the bore 3 within the flat terminus of the housing 1.

The vertical diametrically opposed walls of the bore 3 have formed therein the channels or stepped recesses 11 each terminating inwardly in a finger-like rectangularly shaped extension 12, said channels acting as guiding ways for contacting the ends of the cross head fingers or bayonets 13—13 formed integral with the inner end of the cylindrical portion of the locking bolt 4.

The extensions 12 form guides and holding members for the auxiliary clamping shoe 7 as the latter is provided with opposite channels 14—14 in the walls thereof so that when once in place within the housing when about a terminal post it is locked against turning therein though freely adjustable towards or away from said post.

The outer approximate half of what I have termed the locking bolt 4 is rectangular in cross section and in this instance is shown as square as at 15, this being for convenient application of a wrench for unlocking the adapter as by turning same until the fingers 13 register with the recesses 11 so that same may be removed.

Thus, when the shoe 7 is employed within the housing astride the fingers 12 it can not fall out while the adapter is about a terminal post and if exceptionally tight against the terminal post all that is necessary for quick release and removal of the adapter is a partial rotation of the locking bolt 4 in either direction when the locking bolt may be easily removed by hand and the job is accomplished.

It is deemed apparent that while the instant adapter has been described as using the shoe 7

in conjunction with the housing and locking bolt, the device could readily be successfully employed without said shoe by merely placing the housing over the terminal with the locking bolt in place and then screwing the locking or clamping screw 8 inwardly tightly against the terminal post.

Having thus described my invention, what I claim is:

1. A battery terminal connector comprising a body portion, cable receiving means carried by said body portion, said body portion having a first opening therethrough to receive the terminal of a battery and a second opening in one wall thereof communicating with said first opening, a pair of opposed channels formed in the periphery of said second opening, a locking bolt for insertion through said second opening, fingers carried by said bolt for registering with the channels of said second opening, said channels permitting the insertion and removal of said bolt into said second opening in a predetermined position, said bolt being rotatable within said second opening after said fingers are extended therethrough, and a clamping screw carried axially of said bolt and extending therethrough to engage a battery terminal for holding said body portion firmly engaged on said battery terminal when said bolt is turned within said second opening so that said fingers are not in register with said channels.

2. A battery terminal connector comprising a body portion, cable receiving means carried by said body portion, said body portion having a first opening therethrough to receive a battery terminal and a second opening in one wall of said body portion communicating with said first opening, a locking bolt for insertion through said second opening, opposed finger-like extensions carried on the inner end of said bolt, opposed channels formed in the periphery of said second opening, said bolt being insertable through said second opening and rotatable therein when said extensions are through said channels, and a clamping screw carried axially through said bolt to engage said battery terminal and hold said body portion in firm engagement therewith, said fingers serving to lock said bolt within said second opening when they are not in register with said channels.

3. A battery terminal connector comprising a body portion, cable receiving means on said body portion, said body portion having a battery terminal receiving opening and a second opening in one wall thereof communicating with said first opening, a pair of opposed channels formed in the periphery of said second opening, shoulders around the inner end of said second opening, a locking bolt for insertion through said second opening, a pair of opposed fingers extending from the inner end of said bolt, said fingers being adapted to be received through said channels when said bolt is inserted and removed through said second opening, said bolt being rotatable within said second opening to move said fingers out of register with said channels to engage said shoulders and lock said bolt within said second opening, and a clamping screw carried axially through said bolt to engage a battery terminal and hold said connector in firm engagement with said battery terminal.

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