Dec. 16, 1958 W. E. BLACK 2,865,012

BATTERY CONNECTOR

Filed Aug. 2, 1956

Fig. 1.

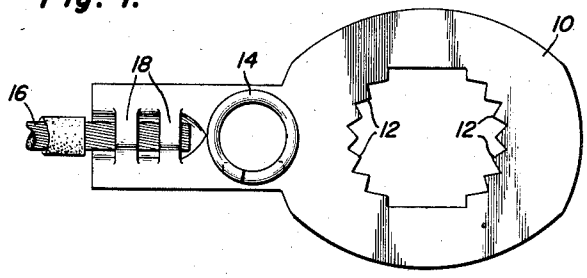


Fig. 2.

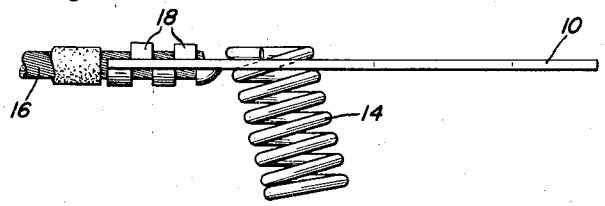


Fig. 3.

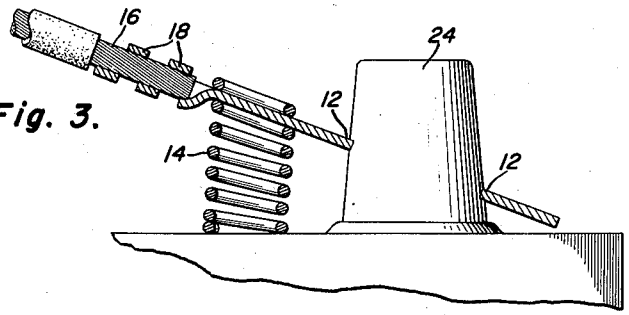
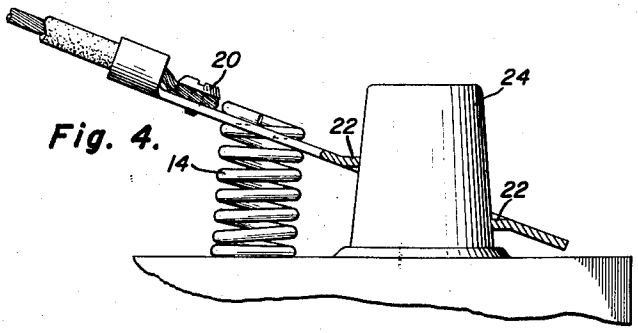


Fig. 4.



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BATTERY CONNECTOR

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2 Claims. (Cl. 339—228)

(Granted under Title 35, U. S. Code (1952), sec. 266)

The invention described herein may be manufactured and used by or for the Government of the United States of America for governmental purposes without the payment to me of any royalty thereon.

This invention relates to a battery connector for making electrical connections to the battery posts of conventional storage batteries.

Many different means have been used for making electrical connections to storage battery terminals. Where the current to be conducted is relatively low, various types of clips, as well as driven spikes, have been used. A common limitation of such connectors is that in addition to their current carrying capacity being low they are very prone to work loose under movement and vibration.

The present invention is calculated to overcome these limitations and to provide a connector having low resistance, reasonably high current carrying capacity and the ability to stay in place and maintain good contact under adverse conditions of movement and vibration.

In the drawings, Fig. 1 shows the top view of one terminal of the connector. Fig. 2 shows a side view of the same connector. Fig. 3 shows a section through the connector in position on a battery post. Fig. 4 shows a partial section through a modification of the connector shown in Figs. 1, 2 and 3.

More specifically, **10** is the flat connector body having a terminal opening with serrated edges **12**. Bias spring **14** is welded to or passed through an opening in plate **10**. Conductor **16** is attached to body plate **10** by being soldered to and compressed between alternate displaced sections **18** or by attachment through screw terminal **20**. Flange projections **22** serve to provide a compressive contact on battery post **24** as opposed to a shearing contact and may be more desirable under some circumstances.

In application, connector plate **10** is forced down over the battery post **24** thereby depressing spring **14** against the top of the battery and applying a bias to

the connector plate. This enables the connector to grip the battery post and form a positive mechanical and electrical connection. Removal is accomplished by recompressing the spring and tilting the connector plate back out of contact with the battery post.

The connector is preferably made of a metal that is reasonably resistant to corrosion by battery acids, or alternatively the connector and spring may be lead coated.

I claim:

1. A battery post connector comprising a substantially flat conductor having a serrated edged opening therein consisting of edges that engage the battery post and which opening is slightly larger than the battery post adapted to be received therein, coil spring means depending from a position adjacent said opening and being continuously perpendicular to the top of the battery, the base of said coil spring means being flat and adapted to positively engage the top of the battery case to provide a stable support for said connector and also to impart a slight cant to the connector relative to the horizontal thereby causing the serrated edged opening to make a low resistance electrical engagement with the battery post.

2. A battery post connector comprising a substantially flat conductor having an opening therein of slightly larger diameter than the battery post and consisting of a plurality of blunt end flanged projections angularly disposed within said opening and extending, on a first side of said opening, upwardly away from the top of the battery and on a second side downwardly toward the battery, coil spring means, designed to cant said connector, depending from said first side adjacent said opening continuously perpendicular to the top of the battery such that the said projections substantially perpendicularly engage the battery post and place said post in compression, said coil spring means having a base adapted to positively engage the top of the battery case to provide a stable support for the connector, said spring imparting a slight cant to the connector relative to the horizontal thereby positioning the flanged projection perpendicularly to the battery post to make a stable low resistance electrical contact therewith.

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