Dec. 30, 1958 B. TECKER 2,866,959

BATTERY POST TERMINAL

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FIG. 1

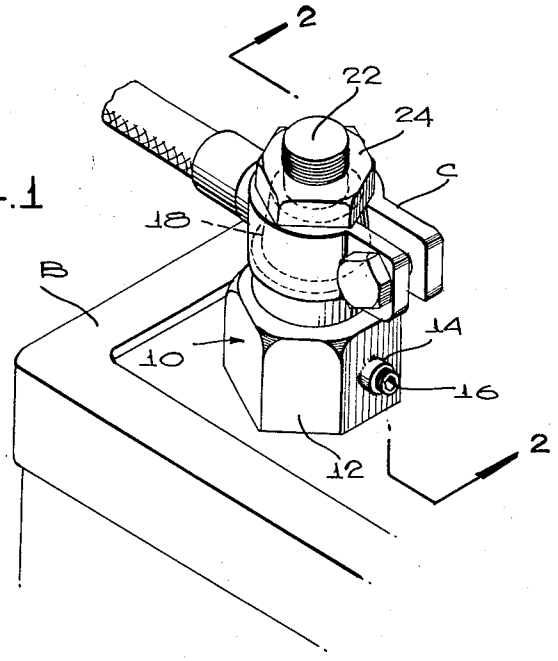
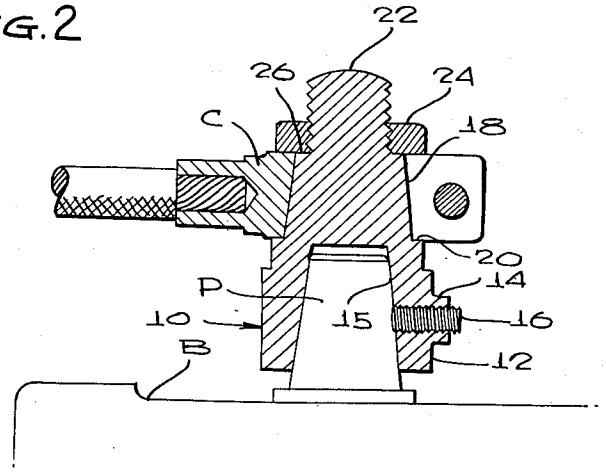


FIG. 2



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BATTERY POST TERMINAL

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1 Claim. (Cl. 339—232)

This invention relates to a device designed to fit upon the conventional, tapered post of an ordinary vehicle battery, and further adapted to receive a conventional cable clamp, in a manner to afford protection to the battery against damage while at the same time promoting ease of attachment and detachment of the conventional battery cable.

The main object of the present invention is to provide a device which can be applied to the conventional battery post, without any modification or redesign whatever of the battery post or of the associated battery, the device being made of an electrically conductive material and being itself adapted to receive the conventional cable clamp, without requiring modification or redesign either of the cable or of the clamp connected thereto.

Another object is to provide a device as stated which can be applied to or removed from the battery post without requiring skilled help, so that the device can be so applied or removed by the vehicle owner in a minimum time and with little difficulty.

Still another object is to provide a device as stated which, when installed, will eliminate corrosion and give perfect contact.

A further object is to so design the device as to permit a change in batteries or in cables to be accomplished easily, with the expenditure of only a few moments.

Still another object is to so design the device as to eliminate the need for tools to sieze the acid-eaten nut when the cable is being removed.

A further object of importance is to so form the device as to insure that the battery will not be broken when the device is being applied to or removed from the same.

Yet another object of importance is to provide a connecting means between the post and cable that will be very inexpensive, will be usable with any conventional battery and cable clamp, and will operate efficiently and permanently.

Other objects will appear from the following description, the claim appended thereto, and from the annexed drawing in which like reference characters designate like parts throughout the several views, and in which:

Figure 1 is a perspective view showing the device applied to a conventional battery, a fragmentary portion of which is illustrated, a conventional cable clamp being applied to the device; and

Figure 2 is a sectional view substantially on line 2—2 of Figure 1.

Referring to the drawings in detail, the reference letter B designates a conventional vehicle storage battery, having the usual tapered posts P. A conventional cable clamp has been designated by the reference letter C. In this connection, the device constituting the present invention, which has been generally designated at **10**, is so designed as to be useful with a conventional battery and with a conventional cable clamp, so that manufacturers need not retool in any way, the device being, in effect, an attachment which can be merchandised in automobile accessory stores, and which can be applied to or removed

from the battery by the vehicle owner with little difficulty or loss of time.

The device **10** constituting the invention includes a body which would be, in a preferred embodiment, made of brass, although the body could be made as well of any other current conducting metal, such as aluminum, etc. The body **12** of the device at its lower end is externally shaped to receive a conventional wrench as shown in Figure 1, so that a holding wrench can be placed thereon for counter-torque when tightening or loosening of the nut upon the post is being carried out.

The wrench receiving lower portion **12** of the body is formed, on one of the facets thereof, with an outwardly projecting, relatively low boss **14** in which is centrally formed a threaded opening communicating at its inner end with a downwardly opening, tapered, post-receiving recess **15** of the body. The threaded opening is adapted to receive a set screw **16**, which when turned home against the post swiftly and fixedly secures the device to the post, effecting a full electrical connection therebetween.

Integral with the wrench receiving lower portion of the body is a tapered portion **18**, at the base of which a circumferential shoulder **20** is formed on which seats the conventional cable clamp C when said clamp is fitted upon the tapered portion **18**. The upper end of the tapered portion is integral with an axial, upwardly projecting extension **22** externally threaded to receive a nut **24**.

At the base of the extension **22** there is defined a circumferential shoulder **26** limiting movement of the nut **24** downwardly upon the axial extension **22**.

In use of the device, and assuming that it is to be installed upon a battery already in use, the first step is to remove the cables from the posts of the battery. The device would be sold in pairs with one of the two devices being marked "positive" and the other "negative," the ordinary electrical signs denoting these characteristics being used to provide a suitable designation of the individual components of the pair. The device marked with the "positive" sign would be placed upon the "positive" post of the battery and the other upon the "negative" post of the battery. Then, the bodies of the respective devices would be tightened by means of the set screws **16**, using a conventional wrench. This connects the devices tightly and permanently to the battery posts.

Then, the nut **24** is removed from the axial extension **22** of each of the devices, after which the cable terminal C is placed upon the tapered portion **18**. Then, the nut **24** is replaced, and is turned home against the top surface of the cable terminal, forcing the terminal downwardly upon the tapered portion **18** and producing perfect contact between the portion **18** and the cable terminal.

As previously noted, the lower portion **12** is so shaped that a holding wrench can be placed thereon to counter the torque applied to the device when the nut **24** is being tightened or loosened.

To replace an old cable, one need merely remove the nut **24** and place the new cable upon the portion **18**, after which the nut is tightened.

When a new battery is being installed, the devices would be removed from the posts of the old battery, and would be placed upon the new battery in the manner previously described herein.

It will be seen that a connecting device such as illustrated and described herein is so designed as to accomplish the several objects previously stated in this application, with damage to the battery or to the cable terminal prevented. Further, the device can be installed or removed with maximum ease and speed, and without requirement of special tools. Still another feature of the invention resides in the fact that it is wholly unnecessary for a manufacturer to retool or change a battery design in any way, and this is true also of the cable terminals. This is

of importance since obviously a device such as illustrated and described herein is not commercially feasible unless it can be applied to and used in association with cable terminals and batteries of conventional design, already in use.

It is believed apparent that the invention is not necessarily confined to the specific use or uses thereof described above since it may be utilized for any purpose to which it may be suited. Nor is the invention to be necessarily limited to the specific construction illustrated and described, since such construction is only intended to be illustrative of the principles it being considered that the invention comprehends any minor changes in construction that may be permitted within the scope of the appended claim.

What is claimed is:

A device for providing a connection between a battery post and a cable clamp, comprising: a body formed from a single piece of electrically conductive material, said body being elongated in a vertical direction and being progressively stepped down in cross sectional area in a direction from the lower to the upper extremity thereof, the body being formed at its lower end with a polygonal, wrench-receiving, external cross sectional shape continuing from the lower extremity of the body to a location short of the midlength part of the body, the body having at its lower end a downwardly opening, tapered recess complementary to a correspondingly tapered battery post over which the body is to be applied, said recess in the sense of a direction axially of the body extending for a distance close to but short of the midlength point of the body, the wrench-receiving polygonal external surface of the body extending a distance longitudinally of the body slightly less than the length of the recess, the body having a radial, threaded passage extending from the outer surface thereof into communication with the recess intermediate the opposite ends of the recess, said body having, intermediate its ends, a tapered portion corresponding

generally to the taper of the battery post but having a larger diameter at its larger end than the diameter of the larger end of the recess, said tapered portion of the body at its smaller end being of a diameter greater than the diameter of the smaller end of the recess, the body having, at the base of the tapered portion, a circumferential shoulder substantially coplanar with the inner end wall of the recess, the body being of externally circular cross-sectional configuration from said shoulder to the adjacent end of the polygonal, wrench-receiving surface of the body, said body at its upper end being formed with an axially, upwardly projecting extension integral with the smaller end of the tapered portion and formed to a diameter substantially less than the diameter of the smaller end of the tapered portion to define a shoulder at the base of said extension extending circumferentially of the body, the last named shoulder being of narrow width, said tapered portion of the body being adapted to receive a battery cable clamp having a tapered surface complementary to the taper of said tapered portion of the body, the bottom surface of the cable clamp bearing against the first named shoulder and the top surface of the cable clamp being coplanar with the second named shoulder and extending about the second named shoulder; a set screw threadedly engaged in said radial, threaded passage to secure the body to a battery post; and a nut threaded upon said extension and bearing against said second named shoulder, said nut projecting radially outwardly of the extension beyond the outer periphery of the second named shoulder to bear against the top surface of the cable clamp.

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